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ABSTRACT

Intended for use in training conferences, the manual describes the philosophy and procedures of Try Another Way, an approach for teaching moderately, severely and profoundly mentally retarded persons and developmentally disabled persons difficult to train. An alternative definition of retardation is proposed which stresses level of functioning determined by the availability of training technology. Try Another Way is explained to use task analysis to teach manual tasks to the retarded. The manual covers the following aspects of the approach: task analysis (explanation and an example of teaching a complex assembly task to retarded blind persons); rules for training and reinforcement; a discussion of the concept of influence; and an interview with M. Gold in which he emphasizes the need for systematic training rather than diagnosis. Four training projects and their task analyses are presented (shaking hands, building pallets, washing hands, and folding napkins). The remainder of the manual provides information on publications, films, and training services available from Marc Gold and Associates, Inc. (CL)

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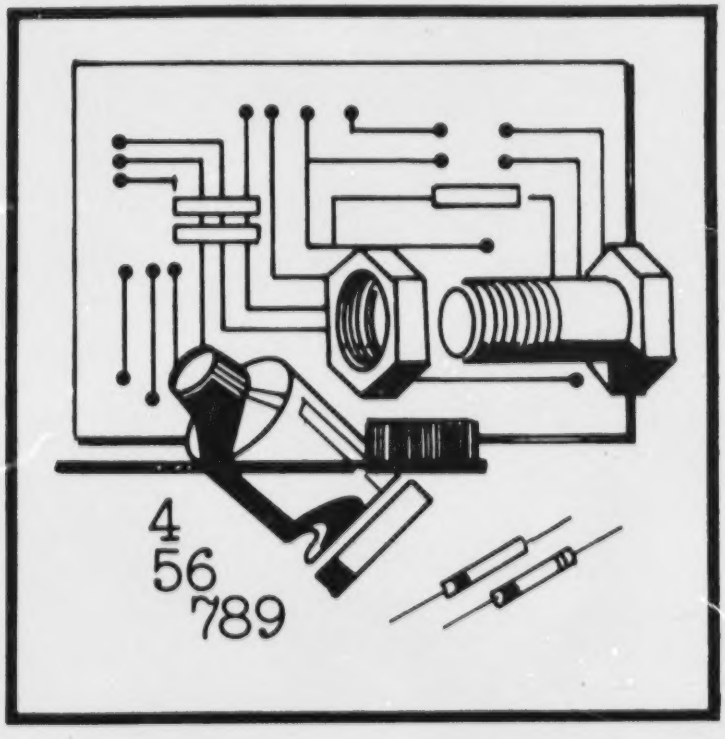
Dr. Marc Gold

TRY ANOTHER WAY

Training Manual



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INTRODUCTION

The purpose of this manual is to introduce you to "Try Another Way," a philosophy and technology for training those who find it difficult to learn. The system was developed by Dr. Marc Gold and is currently being disseminated by Marc Gold & Associates, Inc. (MG&A). The manual contains a number of items designed to provide food for thought, some alternative perspectives, some ideas about people who find it difficult to learn in their society and information related to techniques and strategies for training those people.

The manual is used in three ways: (1) as a guide or program for all Try Another Way conferences; (2) as an information packet for those receiving Try Another Way training through one of MG&A's other forms of staff development; and, (3) as a dissemination item for those desiring more information about Try Another Way.

The original use of the manual was that of a program at conferences. Consequently, some items that are mentioned in the manual, but not elaborated, are discussed more fully at the conferences. The manual is not intended, by itself, to provide a complete picture of Try Another Way. It is a resource that is intended to provide introductory information.

If you are using the manual at a conference, you will notice that many topics mentioned in the manual are discussed at the conference. It would be to your advantage to become familiar with the content and organization of the manual prior to the conference. If you have questions about items discussed in the manual, they should be asked during the conference.

If you are using the manual apart from a conference and have questions, please feel free to direct them to one of the MG&A offices l[illegible] on page 61.

If you desire further information about Try Another Way, the conferences, the inservice training or the long-term training contracts available from MG&A, please contact one of the MG&A offices listed on page 61.

"Try Another Way"
Training Manual

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DEFINITIONS RELATED TO THE TRY ANOTHER WAY APPROACH

1. Artificial Reinforcement - Reinforcement not found in the natural environment or under Criterion II conditions; reinforcement used to accomplish Criterion I conditions or make a transition to Criterion II.

2. Chaining - A training format for multiple pieces of learning which involves presentation of sequential steps in a predetermined order.

   a. Backward Chaining - Presenting the last step, or group of steps, in the chain until the learner has mastered it or them; presenting one or several steps before that in the chain, etc., until the entire chain has been learned.

   b. Forward Chaining - The same as backward chaining starting at the first step of the task and proceeding.

3. Clustering - When using a chaining format, adding several new pieces at the same time. For example, when the person has learned step 19 (the last step), then teach steps 16, 17, and 18. The three steps represent a cluster and are added together because the trainer believes they are best taught that way rather than as single steps.

4. Composite Learner - The presumed collection of learners for whom the task analysis is done.

5. Competence - A skill or attribute that someone has, that not everyone has, that is wanted and needed by someone else.

6. Competence/Deviance Hypothesis - The more competence an individual has, the more deviance will be tolerated in that person.

7. Content - The steps into which the method is divided; what the learner aquires. Content task analysis means breaking a task down into teachable components. "Teachable" is determined by the skills of the teacher or trainer and the skills of the learner.

8. Criterion I - A predetermined point at which it is assumed learning has taken place. The actual decision is based primarily on characteristics of the task.

9. Criterion II - Criterion for any piece of learning should be repeated demonstration or performance of the behavior under the condition where it is ultimately expected to occur.

10. Cycle - The total set of behaviors in a task.

11. Cycle Constancy - Reliable and consistant performance of the exact sequence of moves or behaviors specified for that task in the content task analysis.

12. Deviance - Anything about a person that attracts negative attention or causes discomfort in other people.

13. Education - Creating a special environment so that learning can occur; an environment different than the one under which the learned task will ultimately be performed.

14. Efficiency - Effective use of resources and time. The less time it takes the trainer to "let the learner know" what he is to do, the more efficient the process. Also, the less planning needed, the more efficient the process. As used here, efficiency is not directly related to acquisition or criterion. That is where power comes in. The goal is to find the feedback which has the most efficiency and sufficient power to bring the learner to criterion.

15. Entering Behaviors - See prerequisite skills.

16. Expectancy - The belief on the part of a trainer that a learner will be able to learn any task for which there are proper training procedures, for which the learner has the prerequisites and for which there is sufficient teaching time. Low expectancy is the single most critical deterent to progress in the field of training those who find it difficult to learn.

17. Exposure - A strategy of little power in which a trainer expects a person to learn, without having strategies prepared prior to the instruction to insure that learning occurs.

18. Fading - An instructional strategy in which the intensity or relevance of information provided by the trainer is diminished as the performance of the learner becomes more accurate.

19. Feedback - How the learner knows what is wanted and if he is achieving it. The conveying of information before, during or after an event.

20. Fixture - A jig or device used as a guide or template.

21. Format - Order of presentation of content.

22. Group Instruction - Where two or more individuals with comparable entering behaviors are simultaneously processing feedback from and being monitored by the same trainer. In planning task analyses to be used with a group of learners, it is extremely important to identify prerequisite skills for the process to be used, that is, which forms of feedback the learners must already know in order to benefit from the group instruction.

23. Guard-band - A more narrow range of correctness than is needed for a judgment, specified so that after acquisition performance will remain well within the "real" boundaries of correctness.

24. Handedness - A general preference toward the dominant use of one hand.

25. Imitation - An instructional strategy in which the learner acquires information by observing and then duplicating the behavior or performance of others, for example, the trainer. Demonstration of a task at the beginning of training is one use of imitation. (Also called Modeling.)

26. Individualized (1 to 1) Instruction - Where the trainer is providing instruction to only one learner during a training session.

27. Influence - Everything a trainer does to a learner, and everything a learner does to a trainer. (See page 25)

    a. Content Influence (See page 25)

    b. Process Influence

28. Information - Content that is discrete, dichotomous or absolute; where what is, or are, correct can be specified, all else being incorrect.

29. Job Enlargement - The process of allowing individual workers to determine their own working pace (within limits), to serve as their own inspectors by giving them responsibility for quality control, to repair their own mistakes, to be responsible for their own machine setup and repair, and to attain choice of method (vertical job enlargement). The process of expanding the number of operations an individual worker performs at his job station (horizontal job enlargement).

30. Judgment - Content that is not discrete; where there is a range of correctness without discrete boundaries. Also, see Guard-Band definition, #23.

31. Match-to-Sample - A format for teaching single pieces of learning in which a sample item is matched to a similar or identical item in an array of possible choices.

32. Mental Retardation - See page 7.

33. Method - The way in which a task is to be performed.

34. Modeling - See Imitation.

35. Natural Reinforcement - Reinforcement that does and/or will operate in the absence of a trainer; reinforcement found under Criterion II conditions.

36. Oddity - A format for teaching single pieces of learning in which an odd item must be selected from an array of similar items.

37. Organized Exposure with Feedback - A format for multiple pieces of learning which are not in sequence, for example, most social interaction skills. For use in converting inappropriate social skills to appropriate ones, it involves the creation of an immediate artificial environment, where criterion performance is obtained from the start, then the environment is faded to the original. For use in developing new non-sequenced skills it involves establishing an immediate artificial environment to simplify initial learning and to proceed through a series of environments until Criterion II performance has been achieved. In both cases the use of this format forces the trainer to clearly identify criterion performance, which is difficult to specify for such skills. It also requires establishing some hypotheses concerning the variables involved with the skills.

38. Paired Associates - A format for single pieces of learning in which new pieces of learning are acquired by associating them with pieces of learning already known by the learner.

39. Power - The amount of intervention, assistance or direction required by the trainer in order for the learner to reach criterion. Power lies in the strategies and procedures the trainer must utilize in order for the learner to acquire the task.

40. Prerequisite Skills - Skills which a learner must have in order to reach criterion on the task being taught, but should be known by the learner prior to the present training because the skills are not best taught within the present lesson.

The more power, the less efficiency. The more efficiency the less power. The more "capable" the learner, the less power needed. Since capability

should be prejudged in only a broad sense, the trainer should have a hierarchy of procedures in the process task analysis. That is, strategies to start with for the majority of the more capable learners (e.g., verbal directions). For those who need more power, different strategies which rely less on the capabilities of the learner (e.g., a demonstration of the task). And, if it is probable that some of the learners will need more power, then the trainer should have more powerful forms of feedback in the process task analysis (e.g., direct manipulation of the learner's hands, etc.).

41. Private Deviance - Things that a person chooses to do privately and does not want to become public because they would be perceived as deviant.

42. Procedure - Abbreviated description of interaction between content and process; a cookbook for the training session.

43. Process - The way in which the task is taught; what the trainer does.

44. Production - That work which a person does in the absence of a trainer, after learning has taken place, and after criterion is reached.

45. Prompting - An instructional strategy in which the trainer provides the learner with a cue or a clue as to what is correct.

46. Propensity - A natural inclination or tendency.

47. Public Elected Deviance - Things that are perceived as deviant and that one can choose whether or not to evidence.

48. Public Non-elected Deviance - Things that are perceived as deviant, that show, and that are not under the control of the individual to evidence or not. Much public non-elected deviance may be eliminated or reduced through training, cosmetics or other intervention. Training to eliminate or reduce public non-elected deviance addresses two areas: 1) Elimination of behaviors which attract negative attention; and 2) Training in behaviors or skills, the absence of which attract negative attention.

49. Reinforcement - A subcategory of feedback which includes (intentional or unintentional attempts toward) motivation or other affective influence. This definition should be added to conventional definitions of reinforcement, rather than be viewed as replacing them.

50. Task Analysis - All of the activity which results in there being sufficient power for the learner to acquire the task.

51. Teaching - A term used primarily in educational settings, instead of the term training, which is used primarily in industry or business. The terms are used interchangeably in this system.

52. Total Task - A format for multiple pieces of learning in which the learner experiences the entire task each trial during learning, where errors and assistance reduce over trials. This format is an alternative to the chaining formats.

53. Training - Controlled, systematic manipulations of the environment, administered in such a way that their effects can be measured, and which result in new skills or behaviors on the part of the learner.

54. Try Another Way - A system which includes a philosophy (value system), an organizational structure and instructional technology used to train

people who find it difficult to learn. A phrase used to communicate to a learner that exhibited behavior is incorrect. See page 6.

55. Zero Order Tasks - Tasks or skills, the absence of which attract negative attention, and which are maintained, in their natural setting, with little or no external reinforcement. Society assumes everyone will do these things, therefore, the presence of these behaviors is usually unnoticed.

56. Zero Reject - The expectancy that any individual, given prerequisites, powerful training procedures and time, can be brought to criterion on any piece of learning; no one is thought to be incapable of learning. A zero-reject strategy doesn't deny that all individuals have limits, some more than others. It promotes a recognition of the impossibility of judging limits in the absence of powerful training.

TRY ANOTHER WAY: WHAT IS IT?

The system developed by Dr. Marc Gold to train those who find it difficult to learn is called the "Try Another Way" approach. The best way to describe what that means is to say that it represents: a) a philosophy that focuses its attention on people who are difficult to train, and who have been seen by society as different than most of the other people in society; b) an organizational structure for all of the decisions that have to be made when designing powerful training procedures; c) a large number of instructional procedures which include many procedures developed in other systems, and some procedures which, currently, are found only in this system; and, d) a piece of feedback used to communicate to a learner that exhibited behavior is incorrect. The Try Another Way approach should be viewed as one of many approaches to efficiently and effectively provide meaningful services to people who find it difficult to learn. It is presented as complimentary to other systems rather than something that should be used in place of them. The particular system of task analysis utilized in the Try Another Way approach was designed specifically for teaching manual tasks to people who have been labeled "moderately, severely, and profoundly retarded." Since the initial work, the system has developed to the point where it can provide assistance for designing strategies for teaching a wide variety of people. It is still, however, not a catch-all or an end-all, and should not be viewed as "all you need" to do a good job. All of the other systems, techniques and philosophies available should be investigated thoroughly and should provide additional assistance to those people with a strong commitment to training.

As the system grows and develops, more and more will be added to provide assistance to trainers. What is presented in this manual is an outline of the system which is to be used in conjunction with this conference.

AN ALTERNATIVE DEFINITION OF MENTAL RETARDATION

Marc W. Gold

Current Accepted Definition:

Mental retardation refers to significantly subaverage general intellectual functioning existing concurrently with deficits in adaptive behavior, and manifested during the developmental period (American Association on Mental Deficiency, 1973; reconfirmed, 1978).

Assumptions implicit in old definition:

1. Retardation is a general phenomenon.
2. Intelligence, as defined by tests, is permanent, or
3. Defined intelligence is sufficiently general to describe all functioning and imply potential.
4. Adaptive behavior includes both spontaneous adaptation and trained adaptation.
5. There is such a thing as the developmental period for all people.
6. It is meaningful to catalogue individuals according to their tested intelligence and tested adaptive level.
7. Retardation is most meaningfully conceptualized as a phenomenon existing within the individual rather than the context in which he exists.

New Definition:

Mental retardation refers to a level of functioning which requires from society significantly above average training procedures and superior assets in adaptive behavior, manifested throughout life.

The mentally retarded person is characterized by the level of power needed in the training process required for him to learn, and not by limitations in what he can learn.

The height of a retarded person's level of functioning is determined by the availability of training technology and the amount of resources society is willing to allocate and not by significant limitations in biological potential.

Assumptions underlying new definition:

1. Mental retardation is not a general phenomenon.
2. Intelligence, as defined by tests, is a concept of little use.
3. No behavior clearly defines potential. Prediction describes context.
4. Adaptive behavior can be assumed.
5. Development is lifelong.
6. Train, don't test.
7. Mental retardation is most meaningfully conceptualized as a phenomenon existing within the society which can only be observed through the depressed performance of some of the individuals in that society.

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TASK ANALYSIS: AN EXPLANATION OF THE SYSTEM AND FURTHER EXPLANATIONS OF SOME OF THE TERMS

Task analysis is defined here as all of the activity which results in there being sufficient power for the learner to acquire the task. Power refers to the strategies and procedures the trainer must utilize in order for the learner to acquire the task. The concept of power is intended to place responsibility for reaching criterion with the trainer. The more difficult it is for someone to learn a task the more power the trainer must utilize. The term task analysis is used differently in different situations by different task analysts. The particular form of task analysis described here has been designed specifically for developing training procedures for the moderately, severely and profoundly retarded and multiply handicapped.

There are three major components to Task Analysis:* method, content and process. Method refers to the way in which the task is to be performed. There are several different methods, for example, of putting on a coat. One is to start by inserting an arm into a sleeve and bringing the coat around to the other side; a different method starts by placing the coat on the table, inserting the arms into the armholes of the coat, and then brining the arms up and dropping the coat over the head. For production-line tasks there are almost always numerous alternatives for how the job is designed, each one being a different method.

For a particular task a subjective decision is made by the person doing the Task Analysis (task analyst) as to which method, of the methods available, is the best one. The availability of alternative methods is a function of the creativity and experience of the task analyst. It is usually more difficult to identify alternatives with familiar than unfamiliar tasks. For example, when designing a Task Analysis for putting on a coat, care must be taken to not restrict the alternatives to the method which the task analyst uses for putting on his own coat. With an unfamiliar task such as the assembly of a milking machine pump, however, the task analyst has no preconceived method and so can explore alternatives without prejudice.

In writing a Task Analysis, a statement regarding the method should be made only in those cases where it adds clarity to the analysis. For example, a Task Analysis on the use of a knife and fork might include a statement that the "European method" will be used. Anyone knowing the European method will immediately know how the knife and fork are to be positioned. In most instances, however, the method is described through the Content Task Analysis.

*Where the term Task Analysis is used it refers to the specific form of task analysis being described.

Content refers to the steps into which the method is divided. Content is what the learner acquires or is expected to do. Content Task Analysis means breaking a task down into teachable components. Teachable refers to a judgment made by the task analyst regarding the size of the components into which the task will be divided. In writing a Content Task Analysis the steps are numbered, and described in detail. The Content Task Analysis is similar to a set of instructions that one might obtain with something that was purchased unassembled. The descriptions of the steps, however, are only for the trainer's understanding of the steps of the task. Nothing is mentioned in the Content Task Analysis regarding the trainer function or the interaction between the trainer and the learner. What the trainer does is described in the Process Task Analysis.

Process Task Analysis means designing strategies for teaching the content. Process refers to the way in which the task is taught. Process Task Analysis has three subdivisions: format, feedback and procedure.

Format refers to the presentation of the content. Examples of format for single pieces of learning include match-to-sample, which consists of presenting an object (stimulus) and having the learner select from a group of objects (response choices) the one that matches; and oddity, where the learner selects from a group of objects the one that does not belong. Examples of format for multiple pieces of learning include backward chaining, where the last part of the task is taught until the learner knows it, then the next to the last part, and so on, until the entire task is learned; forward chaining, where the first part of the task is taught until the learner knows it, then the next part along with the first part, and so on until the entire task has been learned; and total task presentation, where the learner performs the entire task every trial, and where errors and assistance diminish over trials until the task has been learned.

Feedback refers to how the learner knows what is wanted and if he is achieving it. Feedback concerns the way in which the trainer provides the learner with information that is conveyed to the learner prior, during or subsequent to action by the learner. Examples of broad categories of feedback would include stimulus control procedures, where the emphasis is on the organization of materials and environments in advance of learner behavior; reinforcement control procedures, which emphasize positive, negative or neutral consequences following action by the learner; and the perspective of the Information Theorists related to knowledge of results, which conceptualizes feedback as much more than the elevation or reduction of need states. From this last perspective, reinforcement is one subcategory of feedback.

Feedback, both in terms of instructions and consequences, may be verbal or nonverbal. Verbal feedback, especially in terms of instructions, is efficient, when it works. That is, telling someone what is wanted of them is usually much faster than showing them or manipulating their hands. For some learners, however, limitations in language skills restrict the amount of information obtainable through language. The use of verbal consequences, in the form of information provided after action on the part of the learner, or verbal reinforcement, is suspect with these learners for the same reason. Examples of nonverbal feedback include color-coding, fading, imitation, direct manipulation, and silence. In writing a Task Analysis general statements regarding feedback are given. Examples of such statements include: "Try another way," "The flat part goes up," "Pick it up here."

Procedure refers to a description of the proposed training plan. The intention of the procedure section is to provide the trainer with sufficient description of the interaction between content and process for the trainer to be able to proceed. The procedure includes a description of the first actions of the trainer. Examples include: "The trainer points to the first part; if the learner does not reach out and take the part, the trainer takes the learner's left hand and places it on the part." The procedures section of a Task Analysis obviously cannot detail the entire training situation. The intention is to describe, sufficiently, how the feedback procedures will be used with the content of the task so the trainer will understand how to implement the Task Analysis.

The next aspect of Task Analysis that needs to be mentioned is criterion. Criterion is defined as a predetermined point at which it is assumed learning has taken place. This point depends primarily on the characteristics of the task. The judgment of the trainer is also important in establishing the point. This level of criterion is referred to as Criterion I. The Criterion II level for any piece of learning is repeated demonstration or performance of the behavior under the conditions where it is ultimately expected to occur. As an example, Criterion I achievement for brushing teeth would be x consecutive demonstrations of the specified behavior. The Criterion II level for the same behavior would be x number of consecutive, correct brushings, in his home or wherever he regularly brushes his teeth, independent of any prompts or assistance. Until the learner meets this second criterion, it cannot be assumed that meaningful learning has taken place.

Data collection should be an integral part of any training session. The data collection form used in our research consists of rows and columns. Each row represents one trial (one completed cycle of all the steps of the task). The columns represent the steps into which the task has been divided, that is, each column corresponds to one step in the Content Task Analysis. The data collection form should also include the name of the individual being trained, and additional columns for the date of each session, and anecdotal information which might be of interest and which would not otherwise be shown on the data collection form. Time is also very useful information. For the tasks used in our research, plus (+) and minus (-) signs are used to describe learner performance on each step. Decisions are made in advance of training regarding what will be accepted as a plus for any particular step of the task. Inspection of the data forms provides a clear picture of the learner's activities. Examination of the rows shows how the learner is doing at any point on the entire task. Examination of the columns indicates which particular steps the learner is having difficulty with and shows progress for particular steps of the task.

The seven-phase sequence described below can provide a training situation where failure is the most difficult task of all.

The Seven-Phase Sequence for Doing
a Complete Task Analysis

Phase 1. Decide on method.

Phase 2. Do a Content Task Analysis.

Phase 3. Do a Process Task Analysis.

Phase 4. Begin training.

When a decision has been made that the Task Analysis needs revision, do one of the following at a time; if it doesn't work, go on to the next. There will, of course, be exceptions to this.

Phase 5. Re-do the Process Task Analysis.

Question A: Is there additional or alternative feedback that might work?

Question B: Is there a different format that might work?

Phase 6. Re-do the Content Task Analysis. If more power is needed,

Question: How can the part or parts of the task which are not being learned be subdivided into smaller, more teachable components?

Phase 7. Re-do the method.

Question: Is there an altogether different way of doing the part or parts of the task not being learned?

What happens when a task analysis has been done, people have been trained, and some of them have not learned the task? The following description of Phases 5, 6 and 7 provide for revisions in the previous steps, which were described above.

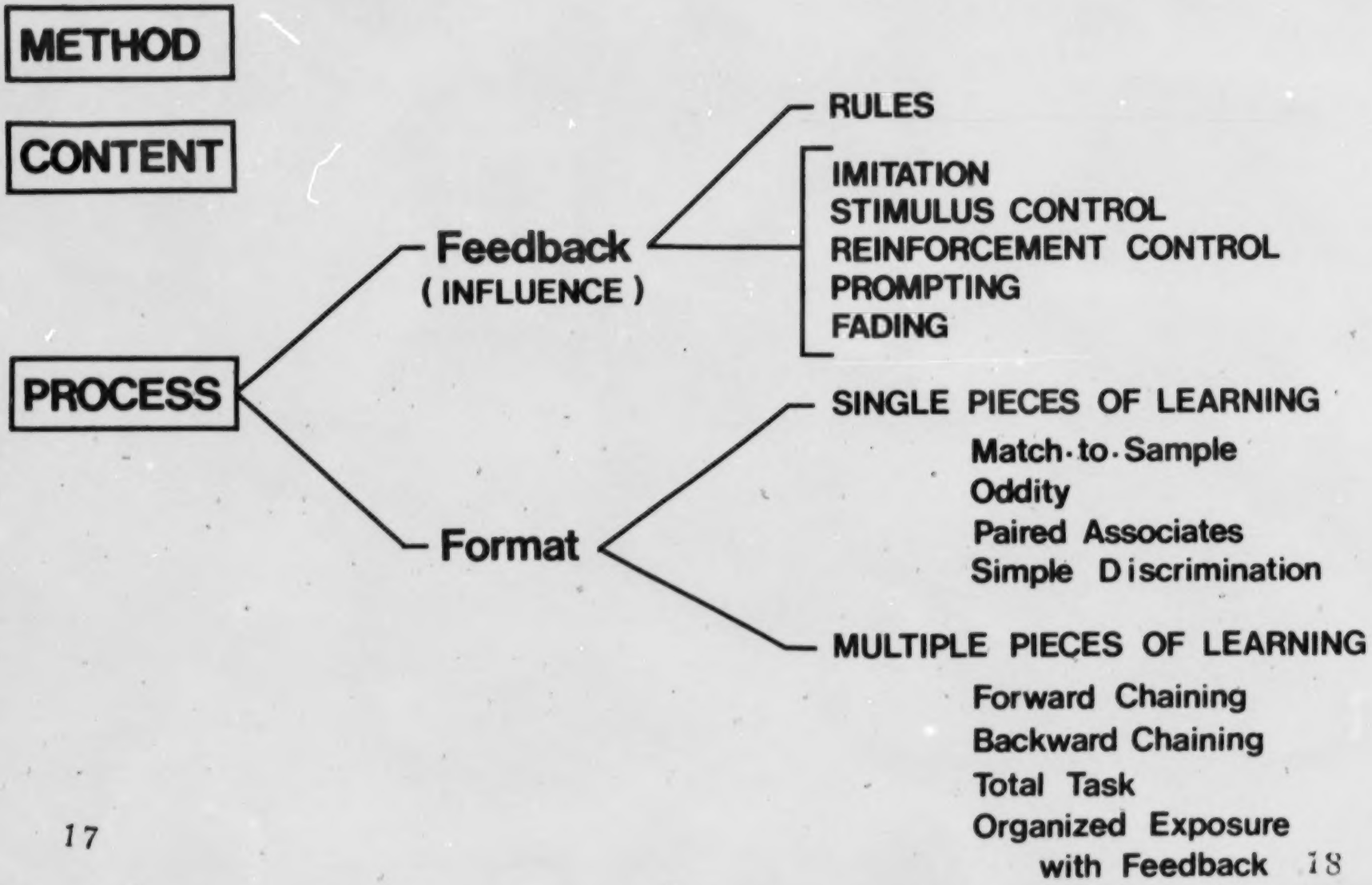
Phase 5: A decision to move to Phase 5 (or 6 or 7) is based on the judgment of the trainer. The decision is that, for a particular learner or group of learners, the initial Task Analysis has insufficient power for criterion to be reached. A decision to go to Phase 5 generates the following questions: 1) What are some other kinds of feedback that might be utilized? If visual discriminations were being taught using only the expression, "Try another way," other verbal cues such as, "Try another way, the flat part goes up" might be tried. 2) Should a different format be tried? If the original Task Analysis calls for the use of a total task format, for example, changing to a backward or forward chaining format might facilitate learning. Phase 5 should result in an increased number of individuals who reach criterion.

Phase 6: A decision to move to Phase 6 generates the following question: How can those steps which are not being learned be further subdivided into teachable components? If one step of the task is "Pick up the sock," this might be subdivided into, "Point to the end of the sock that has the hole," "Insert thumb into hole," "Grasp sock by bringing forefinger down on outside of sock," "Lift sock." Phase 6 should result in a further increase in the number of individuals who reach criterion.

Phase 7: A decision to move to Phase 7 generates the following question: Is there a different way to do the task or a particular part of the task with which the learners are having difficulty? In making a bed, for example, one can

unfold the top sheet, then thrust it across the bed. An alternative method might include placing systematically pre-folded top sheets at the foot of the bed, at one corner, with the folds of the sheet being in a specific orientation, so that the sheet unfolds into its proper position on the bed. Phase 7 involves the selection of a new method, a new Content Task Analysis (Phase 2) and might require changes in feedback (Phase 3). It should be noted that for any given task many methods are probably available and, for each method, a wide variety of Content Task Analyses can be chosen.

Task Analysis Structure



TASK ANALYSIS: AN EXAMPLE USING ACQUISITION AND PRODUCTION OF A COMPLEX ASSEMBLY TASK BY THE RETARDED BLIND[1]

Marc W. Gold[2,3]

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The research program in which this study was conducted has documented the capabilities of moderately and severely retarded individuals to learn and to produce on complex tasks (e.g., Gold, 1972; Gold & Barclay, 1973; Gold, 1974; and Merwin, 1974). Individuals with physical, aural, emotional, neurological and language handicaps, in addition to their mental retardation, have also participated.

The most important product of this research program is a system for training called Task Analysis. In order to validate and expand this particular system two lines of application are being pursued. The first is to apply the system to a different task, electronic printed circuit board assemblies (Merwin, 1973, 1974; Levy, Pomerantz & Gold, 1975). The second application is to a population more difficult to train than those with whom the system was developed. The populations chosen for this are the severely and profoundly retarded blind and deaf-blind.

Historically, blind retarded individuals have been among the most ignored individuals in institutions and agencies serving the retarded. Perusal of the vocational training literature revealed no description of programs or research for this population. The present study was a first step in the development of a skill training program. The working hypotheses were that: 1) Blind retarded individuals could be taught to assemble one of the tasks used in research with sighted retarded individuals; 2) Specific training techniques for the present population could be developed using the Task Analysis system which has generated from our work with sighted retarded persons; and 3) Commitment to a zero-reject model would result in all subjects reaching criterion on the task.

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[1]This project was supported in part by NICHHD Program Project Grant No. HD05951 to Institute for Child Behavior and Development, University of Illinois at Urbana-Champaign and SRS Grant No. 54-P-71084/5 to Dixon State School (Dixon Developmental Center).

[2]Appreciation is expressed to Anna Jeanblanc and Joanne Tornow, trainers, and to Roger C. Hoffman, Director, Unit X, Dixon Developmental Center, Dixon, Illinois.

[3]Published in a condensed form in Exceptional Children, 1976, 43, 78-84.

METHOD

Subjects

Subjects were 22 moderately, severely and profoundly retarded blind and deaf-blind individuals living in a cottage at a large institution. Information on the performance of the individuals is recorded on Table 1.

The first three subjects, those perceived as the most capable prior to training, began their training using the procedures developed by Gold (1972). All three subjects had difficulty seating (correctly positioning) one particular piece, the arm, a part of the task that required increasing amounts of trainer attention as the study progressed. Subjects also had considerable difficulty with the series of steps involved in installing and seating the two shoes in the hub. Several verbal cues were developed to provide additional feedback for discrimination errors (Phase 5). For example, the trainer said, "Feel this and this," touching the subject's finger to the two surfaces that needed to be joined. There was also some further subdivision of some of the steps (Phase 6). For example, what had been one step became a series of steps. Each of the three subjects benefited from these modifications and reached criterion.

Prior to training Subject Four, a decision was made to change the method for inserting the shoes (Phase 7). A Content Task Analysis was done on the new method for assembling these parts. With these changes made, Subjects Four through Twelve were trained. Subjects Four through Eight reached criterion in 9, 22, 20, 23 and 17 trials, respectively. Subjects Nine through Twelve, however, took many more trials to reach criterion. The numbers presented in parentheses for these subjects reflect what their trials to criterion would have been had they not had difficulty seating the arm. As can be seen, this problem accounted for a considerable amount of training time. A decision was made to re-do the Content Task Analysis for seating the arm while Subject Eleven and Twelve were still in training. Subject Twelve was given the new procedure starting at Trial 43. From that point, Subject Twelve made no further errors and went to criterion. Subject Eleven was shown the new procedure at trial 34 but took 111 trials to reach criterion. Examination of the data collection form for this subject revealed two points of interest. First, there were days when the subject refused to work and, consequently, there were several lengthy periods during which time the subject did not receive training. Second, following trial 49, seating of the arm was the only problem keeping the subject from criterion. For this subject, re-doing the Content Task Analysis for seating the arm obviously did not facilitate learning.

At the time Subject Thirteen began his training the Content Task Analysis consisted of 34 steps, the method for inserting the shoes had been changed and it was clear that subjects were continuing to have difficulty seating the arm, even though that part of the task had received further analysis.

Subject Thirteen presented many problems during training. His hands were very stiff to work with, he cried a great deal and, during the seventeenth session, became very upset, and once tried to overturn the table on which the tray was placed. After 75 trials the only mistakes involved seating of the arm. While Subject Thirteen continued training, alternative methods were being explored to solve this problem. A new method was developed, a Content Task Analysis was done on the new method, and Subject Thirteen was given the new procedure beginning with

trial 133. Subject Thirteen made two more seating errors using the new method. No more errors were made on that part of the task, however, discrimination errors on other parts of the task began to recur. Subject Thirteen reached criterion at 194 trials.

The data collection form for Subject Fourteen had numerous inconsistencies suggesting interpretation problems not related to the performance of the learner, who did reach criterion. The data are reported for Subject Fourteen but, because of their probable invalidity, are not included in the group analyses. After 39 trials, Subject Fifteen was making errors only on the steps of the task related to seating the arm. Criterion was reached on trial 57.

Subject Sixteen required 191 trials to reach criterion. She was introduced to the new method of seating the arm on trial 45. Although very few errors were made on this part of the task following trial 45, she continued to have numerous problems on all parts of the task. Examination of the data collection form for this subject shows very slow continuous growth throughout the training period.

Subject Seventeen was trained using the old method of seating the arm. This was an oversight since the new method was available. Table 1 shows that she reached criterion in 105 trials but, following trial 63, errors were made only on those parts of the task involved with seating the arm.

Subjects Eighteen, Nineteen and Twenty began training using the new method for seating the arm. The Content Task Analysis at this point consisted of 37 steps. These subjects had no problem seating the arm and reached criterion in 42, 32 and 38 trials, respectively.

Subject Twenty-one was extremely difficult to train. The trainer had to rely, almost exclusively, on verbal assistance at the beginning of training because the subject did not like to be touched and would severely bite anyone who touched him. For the first seven sessions, when it was necessary for the trainer to touch the subject, she had to immediately jump away to avoid being severely bitten. The situation was further complicated in that, when the subject could not bite the person who touched him, he would bite himself. During session eight this behavior ceased and, from that point, normal training procedures could be used. Following trial 46 this subject went home for a one-month vacation. Training began upon his return and criterion was reached in 63 trials.

Subject Twenty-two reached criterion in 72 trials. His pattern of errors indicated no problems with any particular part of the task. The only modification in procedure for this subject was the dispensing of a cigar following each training session.

Production

Production data are also shown in Table 1. The mean individual hourly production rate was 12.38 brakes per hour (range = 7.1 to 17.4 brakes per hour). Four subjects made no errors during production. Mean percent error rate was 4.15 percent, with a range of 0 to 16.5 percent. Subjects Sixteen and Twenty required some supervision during production because of occasionally reaching for the wrong part and then being confused. This problem was not resolved during the 10 hours of production for these two subjects. Hourly rate data for Subject Twenty-one are extrapolated from half-hour sessions.

DISCUSSION

All three hypotheses discussed on page 14 were supported. The following assumptions were generated from these data: Assumption 1: The more difficult it is for a person to acquire a task, the more the trainer must know about the task. Examination of the data, both within and between subjects, clearly shows performance to be highly affected by the training procedures. When subjects had difficulty acquiring certain parts of the task further inspection of the task, rather than the subject, provided solutions. Diagnostic and evaluative information regarding the subjects was irrelevant. Information about each subject, directly related to performance on the task, was obtained during training rather than prior to training (Gold, 1975a).

This assumption was tested using some of the subjects from the present study. In March, 1974, people in the United States found it difficult to obtain gasoline. A company which manufactured locking gas caps, received orders for very large quantities of their product. They proceeded to recruit assistance from local sheltered workshops in the production of the gas caps. At one workshop, several mildly retarded sighted individuals received two full days of training, but could not complete the task. Two of the trainers who participated in the present study task analyzed the locking gas caps and trained two blind subjects who had reached criterion on the bicycle brake (Subjects Three and Four), to criterion on the caps. Time to criterion for each was less than two hours. Using the task analysis developed by the two trainers, the workshop staff were able to bring to criterion the two individuals who had previously not been able to learn the task, and other individuals in the workshop. Attention to the task provided the key to the locking gas caps. In addition, all of the individuals who at that time had participated in the present study were trained and produced, for remuneration, the locking gas caps.

Assumption 2 was as follows: The more the designer knows about the task the less prerequisites are needed by the learner. This study began training the most capable individuals. Their capabilities might be described in terms of (untested) prerequisites such as verbal skills, social interaction skills, coordination and other assets which the trainers believed would make them the easiest subjects to train, and require the least amount of power from the trainer.

Adherence to the zero-reject model necessitated the development of increasingly powerful training procedures in the absence of subject failure as an available alternative. This approach was successfully applied to the locking gas cap contract, to mobility training and to dressing and bedmaking. There is no attempt here to suggest that all things can be taught to all people. A commitment to such a strategy, however, should significantly increase the willingness of staff to train the severely handicapped to do things not previously attempted, especially since success and failure, from this perspective, reflect trainer competencies rather than subject competencies. This strategy is also seen as increasing the probability that staff will avail themselves of more instructional technology.

This was Assumption 3: The decision to teach or not teach any task to the severely/profoundly handicapped must be based on whether or not that task can be analyzed into teachable components rather than on some general feeling about the difficulty of the task. There are no systems in existence for measuring, in an absolute way, the difficulty of a task (Cronbach, 1957). The most notable

attempts to devise a system for assessing task difficulty can be found in the Human Factors literature (e.g., Fitts, 1951; Nickerson, 1965). Nickerson makes it clear that a measurement for task difficulty is yet to be developed.

In the absence of a system for measuring task difficulty the present data must be described subjectively in terms of their relevance to other tasks. What they suggest is that many tasks previously thought to be beyond the capabilities of the severely handicapped can probably be taught using the Task Analysis system. Before this study was done the Cottage employed a full time person to handle clothing for the residents. Since that time the position has been eliminated, closets have been installed for each resident and residents now are responsible for taking care of their own clothing. Until this project began, all subjects went from place to place within the institution only under the supervision and leadership of a staff member. Mobility procedures were developed using the Task Analysis system described and, presently, more than half of the residents move independently from place to place within the institution. According to cottage staff, the demonstration of competence to assemble the bicycle brakes and locking gas caps provided a modification in staff expectancy which was necessary before training on these other behaviors was attempted. Successful performance on the bicycle brakes facilitated a positive change in the abilities of the residents, as perceived by staff, providing the motivation to train the residents on tasks that had previously been perceived as too difficult (Gold, 1975b).

This study, in addition to the assumptions generated, produced several meaningful changes in our data collection procedures. Early in the study it became evident that the data collection procedures used previously were inadequate. The more difficult it is to train someone, the less likely it is that the trainer's hands are available to record data. A procedure was instituted which required one trainer to train and a second person to record data. Recently this system was replaced by the use of a video recording system. With individuals who are difficult to train, some of the most meaningful data are not easily recorded using a conventional data collection form. Changes in self destructive behavior and vocalizations, for example, are difficult to record simultaneously with changes in performance related directly to the task. It is also of considerable use to have visual documentation of progress and non-progress when reanalysis through Phases 5, 6 and 7 is necessary.

In the present study, trials to criterion was the only dependent measure for acquisition. Previous studies also used errors to criterion and, in some cases, time to criterion. The difficulty of data collection in the present study made reliable measures for time and errors difficult to obtain during the early stages of each subject's training. With the use of the video system, however, reliable measures for errors and time can be taken throughout training and, consequently, will be more systematically analyzed in future studies.

Perhaps the most interesting aspect of this study was the interaction which developed over the course of the study between subject performance and procedures. The study began with the most capable subjects and proceeded through to the least capable subjects. Subjects One through Eight, viewed as a group, showed rather homogeneous performance. Subjects Nine through Thirteen showed homogeneity and, collectively, required considerably more training than the first group. Subjects Eighteen through Twenty-one, initially perceived as the most limited individuals

in the study, learned the task in a mannner not dissimilar from those subjects initially perceived as the most capable subjects. This obviously reflects significant increases in the power of the training procedures as the study progressed. If this finding generalizes to other tasks and other learners it calls for a reconceptualization of the severely handicapped as individuals who require powerful training procedures in order to learn, rather than the present conceptualization which considers them as individuals who can learn very little.

Procedures used for production by the present subjects were not changed from the procedures used previously with sighted subjects (Gold, 1973). Mean hourly productivity for one-hour production in that study was 24.90 brakes. For the present study the mean was almost exactly one-half that rate, 12.38 brakes per hour. Error rate in the previous study, for one hour of production, was 6.30 percent, as compared to 4.15 percent for the present study. While there were numerous differences between the two subject populations, observation of production by the subjects in the present study suggested that their lower productivity resulted from problems of searching for parts in the production bins. For these subjects, the conditions where the behavior was ultimately expected to occur (production), apparently presented problems not resolved by training to criterion in acquisition. Some analysis of the use of the production bins might significantly increase productivity. These data emphasized the importance of Criterion II performance, as defined earlier. This distinction between the learning environment and the doing environment probably takes on increasing importance as the difficulties of the learner to acquire the task increase.

Conclusions

The basic structure of a system of analyzing tasks has been described. The many alternatives for each decision point within that structure were suggested but were not described in detail. Data were presented which demonstrated that people who have always been considered extremely difficult to train reached criterion on and produced a complex assembly task.

The results were presented as continuous, systematic interaction between performance and procedures. It is this interaction that distinguishes this system from most others currently utilized to train the severely handicapped. The results provide considerable motivation for this system to be applied, validated and utilized with other tasks, other individuals and populations, and by other personnel.

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Table 1: Descriptive, Acquisition and Production Data

Subject Number	IQ	Disability*	Sex	Age	Length of Institutionalization	Trials	Production/hour	Total Production Errors	Percent of Errors
1	33	t	M	22	7	34(22)	17.2	1	6
2	32	t	M	43	38	23	15.7	6	3.8
3	42	t	M	31	14	28	15.4	3	1.9
4	40	t	M	29	23	9	16.6	0	0
5	14	ld	M	37	34	22(13)	12.4	10	8.1
6	33	t	F	27	21	23	13.3	22	16.5
7	41	t	M	45	13	17	14.5	4	2.8
8	28	ldp	M	22	16	20	13.7	0	0
9	31	l	M	27	14	94(42)	13.2	4	3.0
10	45	tp	F	22	9	69(31)	10.8	4	3.7
11	52	t	M	22	9	111(27)	9.7	0	0
12	32	t	F	33	28	49(15)	11.6	0	0
13	38	tp	M	27	22	194(75)	10.6	3	2.8
14	48	t	M	43	36	26	4.9	3	6.1
15	23	td	M	20	11	57(39)	9.7	1	1.0
16	17	t	F	29	12	191	12.3	7	5.7
17	47	t	F	72	53	105(63)	7.1	4	5.6
18	20	l	F	15	9	42	15.2	7	4.6
19	25	t	F	38	31	32	17.4	4	2.3
20	14	l	M	24	10	38	12.8	1	8.0
21	22	t	M	56	42	63	8.6	2	2.3
22	27	t	M	42	26	72	9.7	7	7.2
Mean	32			33	21.73	59.95	12.33	4.23	4.15

*t = totally blind d = deaf
l = legally blind p = physically handicapped

RULES FOR TRAINING

These "rules" are not, in any way, intended to be applicable in all situations. For each rule, there are situations where the rule will be helpful in making feedback decisions and other situations where the rules will not be so helpful. The intent of presenting the rules is to provide trainers with some useful tools that can be used at their discretion, not to provide a panacea that will always work. Though there are no rules at the current time for using these rules, they are a very important part of the task analysis system.

1. The Rule of Self-Correction - At this stage, the learner is operating on internal feedback. He recognizes that an error is made and corrects it himself. It is the last stage before correctness.

   a. Allow self-correction only when you think more will be learned from completing the mistake than catching it in progress, and where the mistake will be "obvious" to the learner.

   b. When the conditions discussed above (1a) cannot be met, provide feedback immediately after a decision has been made, but before it has been acted upon. In some cases, especially with verbal responses, the decision cannot be observed until a response is made. In these cases, the rule of self-correction cannot be used. Where it can be used, however, correct the error as you see it about to be made, rather than let it be commited and have to undo the error before teaching the correct way.

   c. When teaching a manual task to learners who require a great deal of power, manually direct the person through the entire task several times to provide a basis of experience from which to respond to future corrections.

2. The Rule of Non-interference - When you have someone attending where you want her to attend, find a way to provide feedback that does not require her to stop attending.

   a. Take care not to flip-flop a learner's attention back and forth between a task and the feedback being provided.

   b. Do not require the learner to use the same "system" used to acquire information to find out if he is or is not learning.

3. The Rule of Inconspicuous Feedback - When you must interfere with a behavior that you believe is intended to be attention-getting, interfere in a way that appears unintentional.

   a. Stop negative behavior in a way that the learner does not perceive your intervention to be a result of her behavior.

   b. After you have "unintentionally" intervened and stopped the negative behavior, provide some attention to the person who was indicating by his behavior that he wanted some. The attention in this case would not be perceived by the learner as being provided because of his behavior or demands, but because of your decision to do so.

4. The Rule of Diminishing Feedback - It is not sufficient that a prompt or other form of feedback get a person to do something correctly; the feedback must get a person to perform correctly in the absence of any further feedback.

   a. Each time you correct an error which has been made previously, provide enough information to correct the error, but less information than the last time.

   b. Each time you change the feedback, the strength of the feedback should reduce; but if it is different information each time, instead of just less and less of the same information, you are adding more and more pieces of smaller and smaller size.

   c. If you have a prompt that works, don't use it again. Do not depend exclusively on the prompts that work in the early stages of training.

RULES OF REINFORCEMENT

Most trainers rely almost exclusively on some kind of reinforcement system as the primary source of power for training people. As such, it is important for trainers to recognize what can be bought with reinforcement and how much it costs.

1. The best reinforcers are natural -- Those which a trainer would ultimately expect to be found where the behavior is to occur. When natural reinforcers are used, there is no problem with transference of reinforcers. Natural reinforcers imply natural people.

2. The more artificial reinforcers you add in, the more you will have to get out. Artificial reinforcers are those which you do not expect to occur where the behavior will ultimately be performed. Artificial reinforcers should always be temporary; they should be used only to establish a relationship or get a behavior going. They should always explicitly lead to a natural system of reinforcement.

3. When the learner knows the trainer is attending, no news is good news. With reinforcement systems the trainer implies: "I'll let you know when you're right." With "no news is good news," the trainer implies: "I'll let you know when you're incorrect, and in a way that won't hurt." and, "I'll give you only as much assistance as you need."

Conditions for Use

a. "No news is good news" is especially valuable when a person is learning a task she perceives to be interesting; the task provides the motivation, the trainer does not have to.

b. The procedure is not especially good for teaching zero order tasks. With these tasks, it is often necessary to use a reinforcement system, then phase it out.

c. A learner should not be allowed to work on tasks on which he is still making errors, in the absence of a trainer. If a learner has not reached criterion, and the trainer must leave, the trainer should either take the learner or the task with him.

d. If you rely on silence to provide feedback, and you have to correct an error, do it in a way that does not hurt.

THE CONCEPT OF INFLUENCE

The word influence describes just about everything that a trainer does to a learner. It can occur before, during or after the learner has acted.

1. Content Influence - Where the trainer intends to focus on and provide the learner with knowledge about the task. When the trainer is emphasizing the use of content influence the following are usually the cases:
   a. The training interaction is less cluttered.
   b. There is a shorter distance to independence.
   c. More useful information is communicated.
   d. It provides an environment and opportunity for the trainer and learner to develop a balanced relationship -- one where there is respect and dignity in both directions.
   e. The learner has increased opportunity to appreciate the task.
   f. A much higher level of real, natural, deep, valued reinforcement comes into play.

2. Process Influence - Where the trainer intends to focus on and provide the learner with feelings regarding the task or about doing the task. When the trainer relies heavily on the use of process influence the following is likely to occur:
   a. The trainer comes to rely on the learner understanding and using many things that have nothing directly to do with the task, for example, trainer feelings, positive and negative contingencies, and the learner's own preferences.
   b. Control of the learner is emphasized rather than the exchange of knowledge.
   c. The training environment tends to be tiring for both the learner and the trainer.
   d. Process influence tends to distract the learner from the knowledge of the task.

The above descriptions suggest a bias in favor of content influence over process influence. It is important, therefore, to point out the value of both. In those situations where, for whatever reasons, the learner is not motivated to learn the task, process influence becomes valuable, and in some cases, mandatory. Process influence should be seen as an extremely valuable part of this instructional technology, but an expensive part. In most instances where process influence is successfully utilized to accomplish a goal, the additional goal of maintaining the behaviors taught in the absence of the process influence must then be achieved. For many things we wish to teach, this is the most efficient and effective way to proceed. For many other things, however, the use of process influence is not necessary. The position taken here is that, where possible, content influence should be used. Where the trainer makes a decision that process influence is required, it should be used effectively and efficiently.

TRAIN, DON'T TEST

by

Peter Faur

An Interview with Marc Gold

Ninety-five percent of those we call "perceptually handicapped" are not, says Marc Gold, research assistant professor for the Children's Research Center and the Institute for Research on Exceptional Children, University of Illinois, Urbana-Champaign. What's more, he says it doesn't help to think of the other five percent in those terms.

Gold, whose thinking is frequently not representative of the field, wants to see the abolition of diagnosis and formal evaluation in working with persons now called "perceptually handicapped," "mentally retarded," or any of a number of other labels which he believes are damaging because they cause professionals to limit their clients' potential too quickly and too severely.

"We're like Procrustes in this regard," Gold says. "You probably remember that Procrustes was the fellow in Greek mythology who had an inn with one bed. He would bring people in and make them fit his bed either by stretching them or cutting off their legs."

"And that's what we're doing. We construct categories and then force people into them. After we've got them there, we make judgments about what they can and cannot do."

Gold describes several problems with maintaining our present system of diagnosis and evaluation. First, most diagnostic and evaluation activities are separated from treatment activities. This means psychological examiners, who see clients perform only certain skills and only on certain kinds of tests, must then communicate what Gold believes to be their inadequate findings to therapists who seldom see how those findings were reached. This leads to setting up categories which Gold sees as useless and sometimes even damaging.

Gold also believes what most "handicapped" people know or do at any given time has little to do with what they can do later. An IQ score, for instance, seldom shows how a person might process information at a later time. In short, he believes to measure ability, performance or intelligence in the absence of a training situation puts the diagnostician in the position of not being able to say who a person really is.

"Here's what I mean by a training situation," Gold says. "Decide what a person needs to know. Find a way to train him to know what you want him to know. You'll learn a lot about him and a lot about yourself. For one thing you'll learn that people can do much more than we expect from the labels we put on them. For another, we often ask people to learn things that seem important to us but not to them."

"So often if people don't learn, it's not because they're mentally retarded or perceptually handicapped. Ninety-five percent of the time I'd say, it's because the teacher doesn't have the proper strategy to teach a skill or because the teacher didn't train the student in the appropriate prerequisite behaviors to accomplish what the teacher wants done now."

"There are all kinds of strategies for teaching that teachers seldom use. You don't have to be only verbal and give directions all the time. You can serve as a model yourself. You can take someone's hands and move them through the motions of what you want done. You can have people learn a bunch of little behaviors which chain together to accomplish a much more complex behavior."

"When you're training, you're learning what you can do and what the learner can do, you're getting changes in behavior and thinking of new things to try and new tasks to teach. You're doing all the diagnosis and evaluation you need."

"If you do it the other way around, that is, spend a lot of time on diagnosis and evaluation through tests, little is accomplished. Diagnosis and evaluation almost never bring about changes in behavior."

Gold has been successful in teaching mentally retarded persons tasks normally believed to be far beyond their capabilities.

For example, he was once called in to consult about a 20-year-old woman diagnosed as severely perceptually handicapped. He told the staff of the institution he would like to work with her in a training situation and wanted them to watch. Staff members said it would be better if they weren't in the room because the woman was easily distracted. Gold insisted they stay.

He showed the woman a 15-piece bicycle brake and demonstrated how to put it together. She immediately became so totally absorbed in the task that the group watching was not at all distracting to her. On the first trial she made 13 mistakes out of 24 possible. The second time through she made only three. On the third try she put the brake together with no mistakes. Gold gave her a kiss and asked her to leave the room.

Turning to the staff, he said, "I think we have five people in this room who are perceptually handicapped. This woman just completed a task you thought she could never do. There was retention in what she did. There was learning. There was systematic discrimination. She's not the one who couldn't perceive to do the learning. You're the ones who couldn't perceive to do the teaching."

Gold believes that doing away with diagnosis and evaluation is not easy because so many organizations are funded for that very purpose. He urges professionals to realize that diagnosis and evaluation are done to meet the needs of the system and not to help the client. "Keep in strictest confidence the information gathered from tests, even to the point of not letting other staff members know the results," he cautioned. "Don't believe information gathered from such tests. Instead, assume that the client can learn and use your energies to prove it."

Gold believes professionals have a responsibility to change present procedures. "For example, when you have to send test results to a bureaucratic organization, put a note on the bottom. Tell them, 'Besides these test results, this person has learned the following....This is far beyond what your tests say he can do. How do you explain this?'"

Gold's present work includes training persons diagnosed as mentally retarded to assemble complex electronic circuitry. He and an associate hope to open a plant for such persons to use their new-found skills in the near future.

"So often what we try to do is make retarded people look, and act 'normal,'" Gold says. "We try to train them to hide or lose their deviance from the norm. We think by doing this we're helping them fit into society."

"But what helps them fit into society is to give them competence. If they can do something which society needs and places a high value on, society will give them a place and chance to do it. The retarded can have a great future. They can do more than we ever thought possible, and will, when we break loose and give them the chance."

An End to the Concept of Mental Retardation

Oh, What a Beautiful Mourning.

Marc W. Gold

If you could only know me for who I am
Instead of for whom I am not,
There would be so much more to see
'cause there's so much more that I've got.

So long as you see me as mentally retarded,
Which supposedly means something, I guess,
There is nothing that you or I could ever do
To make me a human success.

Someday you'll know that tests aren't built
To let me stand next to you.
By the way you test me, all they can do
Is make me look bad through and through.

And someday soon I'll get my chance,
When some of you finally adapt.
You'll be delighted to know that though I'm MR,
I'm not at all handicapped.

Mealtime

by

Marc Gold
&
Ronna Gold

How nice, it's time to eat.
   Why do I say How Nice?
Because now I won't be hungry?
Not really. Mealtime is so much more than
   that for me.

Mealtime is spacer. It's such a nice way to
   travel between each of the other moments in life.
It's a breath between getting from and
   going to,
And at the same time, it's somewhere to be.

It's food. The food part of a meal
   Doesn't always have to be nice.
Just almost always.

I like cold things really cold.
There is only one way I really like eggs.
I like meat I can chew, but not when
   it chews back.
And Bell Peppers?
   Boo!!

You see, I don't ask much for my food.
I just want to like it almost
   always.
How do you feel about food?

I've never been able to ask if you
   hate Bell Peppers, too.

If food was all there was to meals
I don't know what I'd do
I'd just as well eat pills,
   or I could clank my spoon.

Meals are so much more.

People are at mealtime
what seasoning is on food.
Meals are for Us.
Us means more to me than food.
When you have as much time for
me as I have for you,
Mealtime is a great time for us.
Then I don't even remember what I
eat.

At other times of the day it
seems that only I need you.
At those times, could I also be
important for you?
Those have been times of benevolence.
Benevolence -- a badly paved one way street.

Mealtimes are not benevolent times.
Mealtimes are balanced times for us.

I hate to remember before there was us.
I'll call that we.
That's just you and me.
Not really together -- not at all us.

We didn't balance.
We were just for the food.
I had no respect for you, and you none
for me.

I wondered: Can't meals be more than food?
And dribblechin, and hurry up,
And then and again, you don't look at
me and I won't look at you.

Then something -- the beginning of us,
You were teaching me to use a spoon.
We had been working on that for weeks.
I didn't know why, and you didn't either.

That day, I put a spoonful of applesauce
in my ear, and you laughed.
You laughed so hard, I began to laugh,
too.

I still don't know why you stopped
laughing when you saw me laugh
with you.

Things have been so different ever since
I think what happened was respect.
It comes out in so many ways.

Do you know you stopped those awful
smiles you used to give me?

I know they were awful cause you never
gave them to your friends.
Your voice changed, too.
It used to be squeaky, now it's you.

You didn't think I could learn anything?
Since the laugh, you have come up with
so many new things for us.
And I know you think of me more.
I think more of you, too.

That's one of the nicest things about us.
I want to learn exactly as much as you
want to teach.

Did you notice that I almost cried
yesterday?
I couldn't tell if you did or not.
We are together a lot of the day.
But until yesterday, mealtime was the only
time for us.

Yesterday you asked me to help me
make my bed.
My God, I thought, could the bedroom
be for us, too.
The way you touched me. The way you
looked at me.

I don't understand the bed yet,
But I'll do anything for us.
With those awful smiles, the squeaky voice,
And your all day long bits of food, we
never got anywhere.

BUT LOOK OUT FOR US.

MG&A TRAINING PROJECTS

and their

TASK ANALYSES

Once the people in an agency become familiar with the Try Another Way approach, and if they want the system implemented in their organization, MG&A provides long-term, extensive training to bring instructors to criterion as Try Another Way trainers. These programs usually last one to three years and are arranged for state departments, independent agencies or school districts, or consortia of agencies working together for a common result.

The first training contract of this type accepted by MG&A was The California Project, a two-year endeavor with the California Departments of Rehabilitation and Health. At the conclusion of the project in July, 1978, over 100 people had attained competence as Try Another Way trainers, 1,888 learners had reached criterion on 1,766 new tasks. In addition to these results which were part of the contracted responsibilities, an additional 883 persons received short-term training and over 4,300 persons were exposed to the Try Another Way approach through a number of presentation modes. Other statewide projects similar to The California Project have been conducted or are currently underway in Massachusetts and Georgia, with still others being planned for several additional states.

As part of the training in these projects, each participant writes a number of task analyses. These analyses are in two areas: vocational skills and daily living skills. The criteria for acceptance of the task analyses are that they be in the proper technical form and that they have been used to bring a learner to criterion.

As MG&A began to collect these analyses, much interest was expressed by hundreds of people to obtain analyses in areas in which they were interested. In response to these requests, MG&A established a mechanism for distributing these analyses for a modest service charge. The number of analyses now available is approaching 700, and additional ones are regularly being added. For information about the task analyses, and other products available from MG&A, see the order form in the back of this manual or contact:

Marc Gold & Associates, Inc.
P. O. Box 5100
Austin, Texas 78763
(512) 451-8079
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MARC GOLD & ASSOCIATES, INC.

Task Analysis

Task Name

Shaking Hands

Author(s)

Jack R. Wheeler

Advisor(s)

John G. Johnson

Composite Learner Men and women usually labeled TMR, EMR, with functional use of right hand.

Entering Behavior Receptive language, visual capabilities, squeeze grasp capabilities.

Task Description The learner will be able to shake hands with another person as a spontaneous form of greeting.

(STD Jan.'77)

Purpose: To spontaneously shake hands as an acceptable social skill in greeting someone.

Criterion: Person correctly responds with handshake to verbal greeting three consecutive times.

CONTENT TASK ANALYSIS

1. Extend right hand to greeter.
2. Grasp greeter's right hand.
3. Squeeze greeter's hand.
4. Move grasped hand up and down briskly.
5. Release grasp.
6. Return hand to relaxed position at side.

PROCESS TASK ANALYSIS

Format: Total task presentation.

Feedback: Learner will receive a handshake and some form of verbal praise or encouragement. Reinforcement will be natural, that is, the same received by all people who shake hands, a sign of social approval and acceptance.

Hierarchy of Intervention:

1. Verbal assists
   a. "Sqeeze"
   b. "Release"
   c. "Try again"
2. Gestural assists:
   a. Trainer extends hand to composite learner.
3. Physical assists:
   a. Trainer moves learner through correct completion by grasping learner's hand with right hands and grasping underside of learner's extended arm with left hand and manipulating arm and hand through completion of the step.
   b. Trainer guides learner through step by grasping hand and touching underside of learner's arm.
   c. Trainer grasps learner's hand.

Procedure:

1. Arm extended with elbow slightly bent full length approximately six inches above waist level.

2. Squeeze grasp.

3. Up and down motion - "up" is toward ceiling or sky, "down," toward floor or ground -- total distance of movement not to exceed five inches.

Task Name Shaking Hands 0472

Learner | Agency

Description | Sheet ___ of ___

Trainer | Total Training Time (minutes) ___

Advisor | Criterion

MG&A

Trials	Date	Extends hand	Grasps	Squeezes	Up and down	Releases	Returns arm to rest	Trial Time	Comments
1									
2									
3									
4									
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20									

(STD data sheet, Nov.'77)

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MARC GOLD & ASSOCIATES, INC.

Task Analysis

Task Name BUILDING PALLETS - 3 over 4 stringers

Author(s) Patricia M. Keene

Advisor(s) Jude Mills Fransen

Composite Learner Sighted individuals who have the use of both hands, and sufficient strength to lift a hammer.

Entering Behavior None

Task Description The learner will be able to place 6 cross boards and 7 stringers in their proper sequence, aligned and nailed correctly for the building of pallets out of 2X4's. Finished pallet will be 36" wide and 106" long.

CONTENT TASK ANALYSIS

Purpose: Training task for workshop teaching use of hammer and eye-hand coordination.

Criterion: Two in a row with no errors or assistance.

Composite Learner: Moderately or severely retarded with vision, capable of lifting a hammer.

Materials: 6 - 2x4x36" long cross boards
7 - 2x4x106" long stringers.

Tools: One hammer and approximately 90 10-penny nails and two jigs.

Content:

1. With both hands, remove one cross board from pile of lumber next to pop-up saw.
2. Starting at left end of table, slide cross board on its 1-1/2" edge into first white slot until it hits the stop on the other side of the table.
3. Repeat steps 1 and 2 until all white slots are filled with cross boards. (You will have six cross boards.)
4. Using both hands, remove one stringer from first stacked pile of lumber located close to left end of table.
5. Place stringer flat and lengthwise on top of cross boards.
6. Place two more stringers flat and lengthwise on top of cross boards.
7. Remove white and blue jigs from out-of-use positions.
8. Place first jig approximately a foot and a half from end of table on top of stringers with white side of jig down.
9. Insert a stringer into each notch on bottom of jig.
10. Repeat steps 8 and 9 on other end of table using second jig.
11. Learner moves to end of table where nail box is, on side of table closest to pop-up saw.
12. Align end of stringer closest to learner with corner and outside edge of first cross board.
13. With H1, remove hammer from out-of-use position.

14. With H2, remove 5 or 6 nails from nail box.

15. Using pincer grasp and H2, place pointed tip of one nail on corner of stringer just above cross board and approximately 1/2" in from end.

16. With H1 and hammer, set the nail.

17. Remove H2 and finish driving the nail through the stringer and into the cross board, keeping stringer aligned with edge of cross board.

18. Learner moves to next cross board.

19. Align side of stringer with end of cross board and place nail on top of stringer over cross board approximately 1/2" in from edge.

20. Repeat steps 16 through 17.

21. Working from left to right, continue in this manner until each cross board has a nail in it.

22. Working from right to left, place second row of nails in first stringer approximately 1-1/2" from previously placed nails in a straight line with the cross boards.

23. Starting at end of table where nail box is, align end of middle stringer with outside edge of cross board.

24. Nail middle stringer into cross boards using steps 13 through 18.

25. Learner moves to other side of table.

26. Starting at end of table where nail box is, nail 3rd stringer into place.

27. Remove jigs and return to out-of-use position.

28. Turn partially completed pallet over so stringers are on bottom.

29. Place four stringers flat and lengthwise on top of cross boards.

30. Remove white and blue jig from out-of-use position.

31. Place first jig on top of stringers, approximately a foot and a half from end of table with blue side down, fitting one stringer into each notch.

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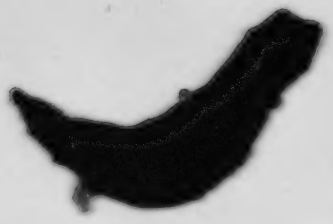
32. Place 2nd jig, blue side down, approximately 1-1/2 feet from other end of top of stringers, fitting one stringer into each notch.

33. Nail each stringer into place using same method as on first side of pallet, keeping ends of stringers even with outside edges of end cross boards and putting two nails through the stringers into the cross boards.



PROCESS TASK ANALYSIS

Format: Total task presentation.

Feedback: Use hierarchy of verbal cues:
1. "White slots only" for placing of cross boards
2. "Align this end in place of 1st nail"
3. "Start here" end of table where nail box is located
4. "Try another way" - any time
5. "Flip over" after first side is done

Use of hand-over-hand manipulations may be necessary in placing of nails and swinging of hammer.

Procedure: Position learner on left side of table between table and pop-up saw, help the learner set up first pallet and show how to set and drive the nails. To set nail, tap nail in gently until it stands on its own. To drive nail, remove hand holding nail and deliver more forceful blows to nail to drive it into the wood.

If learner strikes nail on its side and it bends or flys out, have learner start with new nail.

KOPPERS PALLETS

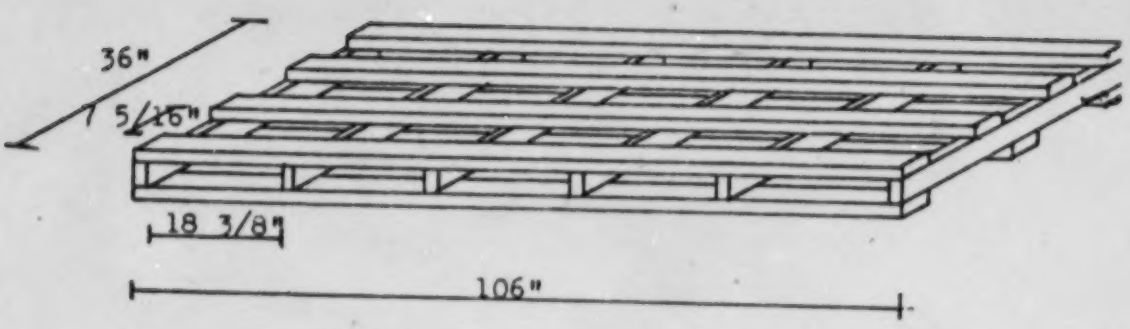
4/3 string 106"

Material list

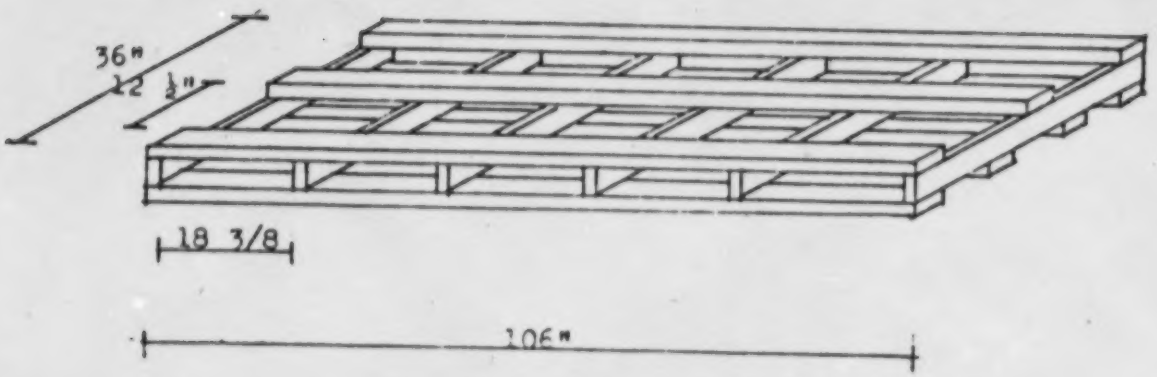
7- 2"X4" - 106"

6 2"X4" - 36"

Top View 4 strings

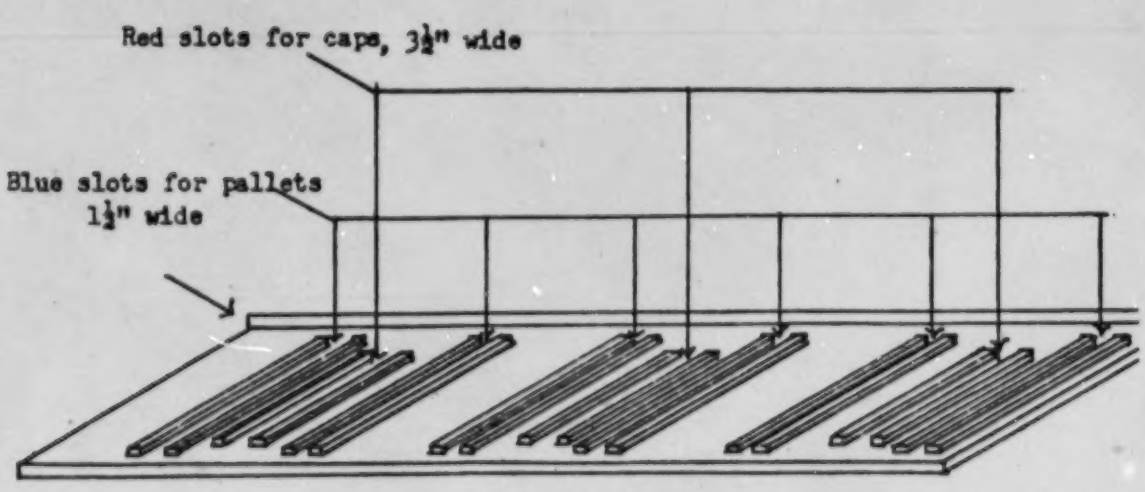


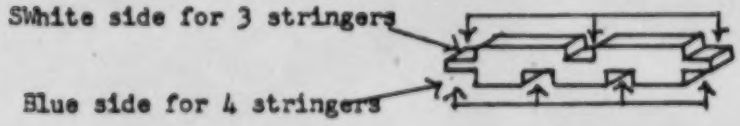
Bottom View 3 strings



½"= 1'

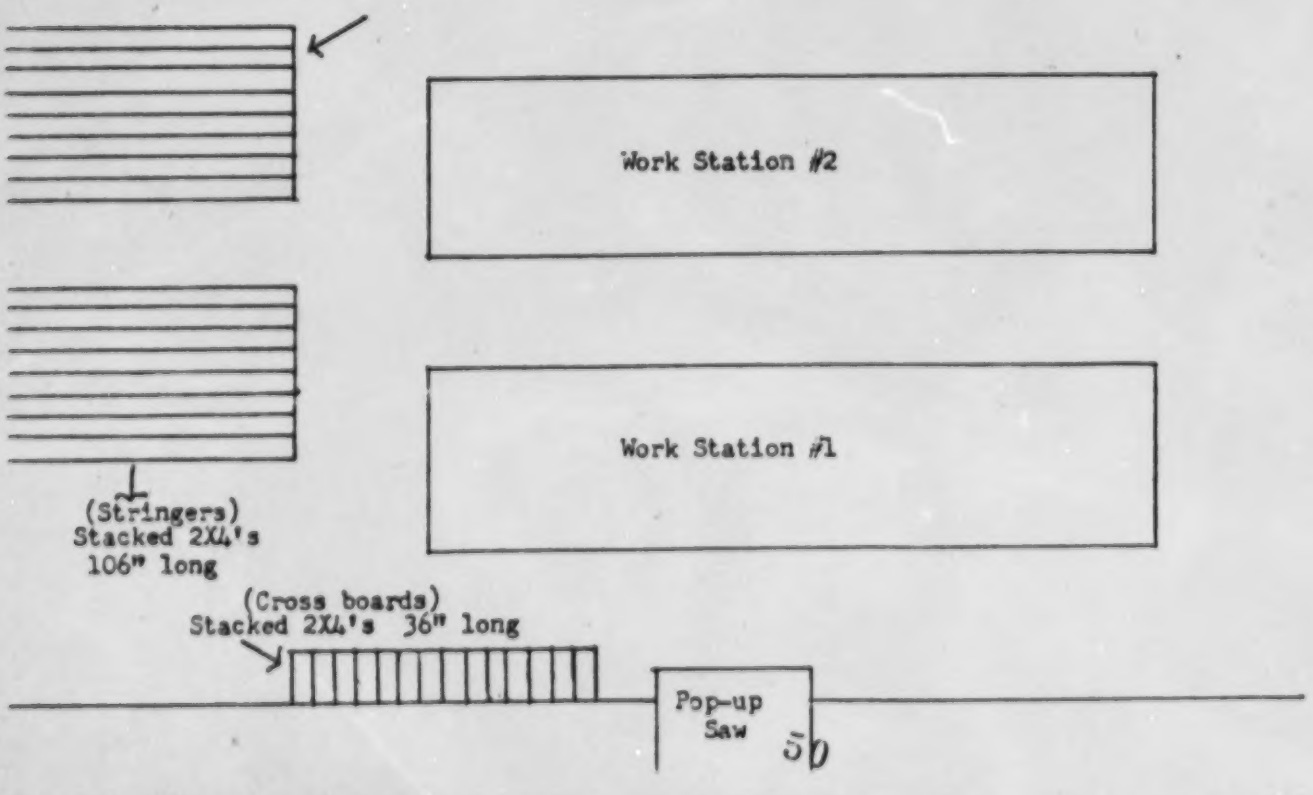
WORKSTATIONS FOR KOPPERS PALLETS AND CAPS





JIG for 3 over 4

FLOOR PLAN



Task Name Building a 3/4 Pallet.

Learner
Description
Trainer
Advisor

Agency Center
Sheet 1 of ___
Total Training Time (minutes) _____
Criterion Two in a row - no errors or Assistance.

MG&A

Trials	Date	1st Cross	2nd Cross	3rd Cross	4th Cross	5th Cross	1st Stringer	2nd Stringer	3rd Stringer	Jigs	Align	Nail 1st.St.	Align	Nail 2nd.St.	Align	Nail 3rd.St.	Flip	Place St.	Jigs	Align	Nail 1 St.	Align	Nail 2 st.	Align	Nail 3 st.	Align	Nail 4 st.	Forward.	Trial Time	Comments
1																													
2																													
3																													
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(STD data sheet, Jan.'77)

MARC GOLD & ASSOCIATES, INC.

Task Analysis

Task Name	Washing Hands
Author(s)	Juanita Thompson, Katie Jones Sandy Byrd
Advisor(s)	Rona Leitner
Composite Learner	Individuals with severe develop- -mental disabilities, sight and no physical limitations of hands or arms.
Entering Behavior	None

Task Description The task will be performed with the learner standing in front of the sink. Needed materials are a bar of soap, paper towels in a dispenser on the wall, and a wastepaper basket by the door. The sink has two handles (one hot, one cold), and one spout.

Criterion: Two consecutive trials without error or assistance on one day, and two consecutive trials without error or assistance one week later.

(STD Jan.'77)

CONTENT TASK ANALYSIS

1. Stand facing the sink.
2. Push up sleeves.
3. Place H1 on cold water faucet.
4. Turn faucet handle one quarter turn, counter-clockwise, until there is a stream of water flowing into the sink.
5. Release H1.
6. Place H1 on hot water faucet.
7. Turn faucet handle one quarter turn counter-clockwise, until the water is warm, and stream is steady but not splashing over sink.
8. Release H1.
9. Pick up soap with hand closest to soap.
10. Place both hands under stream of water to wet soap and wet hands to wrist.
11. Remove hands and soap from under stream of water, but hold them over sink.
12. Rub both hands palms facing each other, with soap between, to make lather.
13. Place soap on sink edge and release hand.
14. Scrub left palm, back of hand, and wrist with right hand to cover with lather.
15. Scrub right palm, back of hand, and wrist with left hand to cover with lather.
16. Spread fingers slightly apart and bring hands together until fingers interlock.
17. Rub inner spaces between fingers of both hands back and forth, until surfaces are covered with lather.
18. Place both hands under stream of water to remove lather.
19. Rinse lather off of left palm, back of hand, and wrist with right palm.

20. Rinse lather off of right palm, back of hand, and wrist with left palm.

21. Interlock fingers with hands facing palm to palm.

22. Rinse inner space between fingers by moving hands back and forth until all lather is rinsed away.

23. Place H1 on hot water faucet.

24. Turn handle clockwise to off position.

25. Release H1.

26. Place H1 on cold water faucet.

27. Turn handle clockwise to off position so that there is no water flowing into sink.

28. Release H1.

29. Wipe water off of left palm, back of hand, and wrist with right hand, until left hand is dry.

30. Place towel in left hand.

31. Wipe water off of right palm, back of hand, and wrist with left hand, until right hand is dry.

32. Place used paper towels in wastepaper container.

PROCESS TASK ANALYSIS

Format: Total task presentation.

Feedback:

1. For a step never performed correctly:
   a. Verbal cue "Try another way" or nonverbal, squeeze on arm.
   b. Point to a critical dimension of step.
   c. Model step appropriately.
   d. Manipulate learner's hands through step without completing step.
   e. Manipulate learner's hands to completion of step.

2. For a step done correctly on previous trials that the learner is now missing, use the reverse of the above hierarchy. That is, begin with more power (as in 1-e.) and gradually diminish the feedback as in a fading procedure.

3. For corrected errors and completion of a trial:
   a. "Good" or nonverbal, pat on back.

4. Step 11 - Hands covered with lather.

5. Step 22 - All lather rinsed away.

6. Step 27 - Water no longer dripping from spout.

7. Step 31 - Both hands completely dry.

Procedure:

1. The learner will be in the wash area facing the sink. The trainer will be standing to the side of the learner. The trainer will directly manipulate the learner's hands through one trial. Then the trainer will say "Now you do it" or motion for the learner to begin.

2. Step 13 - If there is no lather, squeeze the learner's hands together as he rubs to increase friction. If there is still no lather, repeat Steps 11, 12, and 13.

3. Step 18 - Trainer rinses own hands first.

4. Step 29 - Trainer dries own hands first so that he will not wet learner's hands while helping to dry.

Task Name Washing Hands

Learner	**Agency**
Description	**Sheet** ___ **of** ___
Trainer	**Total Training Time (minutes)** _____
Advisor	**Criterion**

MG&A

Trials	Date		Sleeve	Cold water	Turn & release	Hot water	Turn & release	Soap	Wet hands	Rub hands	Return soap	Scrub left	Scrub right	Scrub fingers	Rinse left	Rinse right	Rinse fingers	Hot water	Turn Release	Cold water	Turn Release	Towel	Wipe left	Wipe right	Wastebasket																							Trial Time	Comments
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(STD data sheet, Jan.'77)

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Task Analysis

Task Name Napkins (folding)

Author(s) Adriana Simmons and Daniel McCleary

Advisor(s) Lu Brunet

Composite Learner Severely dvelopmentally disabled

Entering Behavior Has use of both hands

Task Description Folding a square paper napkin using both hands (in half).

(STD Jan.'77)

Purpose: To teach how to fold paper napkins in half.

Criterion: Four correct folds out of five consecutive trials.

Materials: Unfolded paper napkins (in a pile to right of learner with folded edges facing learner).

CONTENT (Procedure in parenthesis)

1. Place H1 fingers on pile of napkins (with thumb touching folded edge).
2. Lift 1 napkin in pincer grasp H1.
3. Pull to left of pile directly in front of learner. Release.
4. Place fingers of H2 on napkin (with small finger over to left edge of napkin). (H2 fingers covering approximately 1/2 of napkin on left.)
5. Place thumb of H1 under bottom right corner.
6. Slide thumb up side to top right edge.
7. Place index finger of H1 on napkin against thumb of H1 in light pincer grasp.
8. Rest knuckles of H1 on table for stability.
9. Bring top right corner across to top left corner (rotating H1 slightly upward so corner remains visible for matching corners).
10. Slide H2 out - directly downward.
11. Place H2 fingers on bottom edge of folded napkin.
12. Release H1.
13. Place H1 fingers horizontally on H2 fingers.
14. Slide H1 fingers up napkin to make fold.

Format: Total task presentation.

Feedback:
1. Use hand guided manipulations as necessary using the Rule of Diminishing Feedback.
2. Verbal cue "Try another way" followed by "Good" upon correction may be used for errors rather than hand-guided manipulations as a fading measure.

Task Name Napkin (folding)

MG&A

Learner

Description

Trainer

Advisor

Agency

Sheet ___ **of** ___

Total Training Time (minutes) ___

Criterion

Trials	Date	Place	Lift	Pull	Release	Place	Thumb	Slide up	Pincer grasp	Rest	Match corners	Slide out	Place	Release H1	Place	Slide up	Trial Time	Comments
1																		
2																		
3																		
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ANNOTATED BIBLIOGRAPHY OF MARC GOLD'S WORK

This bibliography lists articles, pamphlets and other publications by Marc Gold and others which relate specifically to the Try Another Way approach or to training in general. Before January, 1979, Dr. Gold's university project subsidized the distribution of these articles. However, since this subsidy is no longer available, a reproduction and service fee must be requested of those desiring to obtain copies of his work.

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In addition to this work, MG&A has collected, abstracted, classified and cross-referenced well over 2,000 reprints, reports, etc., dealing with many aspects of mental retardation, i.e., training, evaluation, residential care, etc. This wealth of information is available for use, but only at the home office of MG&A in Urbana, Illinois. If you are interested in using the system, please contact:

Marc Gold & Associates, Inc.
708 West Oregon
Urbana, Illinois 61801
(217) 384-4314

PUBLICATIONS

Marc W. Gold

1. Gold, M. W. Preworkshop skills for the trainable: A sequential technique. Education and Training of the Mentally Retarded, 1968, 3, 31-37. (7 pages)

   Task analysis, or the reduction of a task to its smallest component parts, is demonstrated here through trainable mentally retarded children for success in sheltered workshop activities. The purposes of the analysis are (a) to enable the teacher to teach by suitably small steps, and (b) to aid in locating a specific problem when a child encounters difficulty.

2. No longer available.

3. Gold, M. W. The interdisciplinary approach: A nominal fallacy. Paper presented at the Great Lakes Region, American Association on Mental Deficiency, September 1969, East Lansing, Michigan. (6 pages)

   This is a very brief comment on some issues related to interdisciplinary approaches in mental retardation. A distinction between interdisciplinary and multi-disciplinary is discussed.

4. Gold, M. W. The preparation of secondary teachers of the mentally retarded. In D. Brolin & B. Thomas (Chm.), Preparing teachers of secondary level educable mentally retarded: Proposal for a new model. Project Report No. 1, Department of Rehabilitation and Manpower Services, School of Education, Stout State University, Menomonie, Wisconsin, April 1971. (6 pages)

   The importance of teachers obtaining experiences similar to those for which their students are being trained is discussed, both in terms of life experiences and vocational experiences. The importance of instructional technology is also discussed.

5. Gold, M. W. & Scott, K. G. Discrimination learning. In W. B. Stephens (Ed.), Training the developmentally young. New York: John Day, 1971. Pp. 420-444.

   This chapter describes concepts from basic research on attention theory and discrimination learning in a manner designed to make the concepts useful to teachers and others working with normal or handicapped children. (25 pages)

6. Gold, M. W. Stimulus factors in skill training of the retarded on a complex assembly task: Acquisition, transfer and retention. American Journal of Mental Deficiency, 1972, 76, 517-526. (10 pages)

   Sixty-four moderately and severely retarded individuals enrolled in four sheltered workshops learned to assemble a 15-piece bicycle brake and were then tested for transfer to a 24-piece bicycle brake. Fifty-three of the subjects were retested on both tasks after one year. Training procedures utilized information obtained from the basic psychological research on discrimination learning. One-half of the subjects worked with the parts of the training task brake as they came from the factory (Form-only). The others worked with parts

that were color coded (Color-Form). Coding consisted of painting that surface of each part that is facing the subject when it is placed in the proper position for assembly. All groups worked with the parts of the transfer task brake as they came from the factory (Form-only). Half of the subjects learned the tasks to a criterion of six correct out of eight consecutive trials, the other half performed 20 trials beyond criterion on the training task brake (over-learning). The Color-Form Groups learned the training task brake significantly faster than the Form-only Groups. Overlearning did not affect transfer. The one year retention study yielded highly significant retention effects.

7. Gold, M. W. Relevant Experiences for University Students: A Model and an Example. Revision of a paper presented at the National Collegiate Honors Council Convention, October 1970, Boulder, Colorado. (6 pages)

   This paper discussed an independent study program at the University of Illinois which is designed to give students an opportunity to work with normal or handicapped children. It also suggests some rules for setting up an independent study program.

8. Gold, M. W. Research on the vocational habilitation of the retarded: The present, the future. In N. R. Ellis (Ed.), International review of research in mental retardation, Vol. 6. New York: Academic Press, 1973. Pp. 97-147.

   The intention of this chapter is to describe the present status of research on the vocational habilitation of the retarded and to propose directions for future efforts. This is not intended as a review of the literature. References are used only to support statements made and to provide the reader with resources for more in-depth study. The vocational training of mentally retarded individuals presently utilizes the resources of three primary disciplines: rehabilitation, psychology, and education. Research from these disciplines is discussed. Research from two other sources not normally associated with rehabilitation is also discussed in terms of its potential contribution to the field. These are Industrial Management and Industrial Engineering.

   An attempt is made in this chapter to emphasize the importance of the relationship between principles developed in laboratory settings and the application of these principles to vocational training. For the reader who is content with existing levels of expectancy presently held by society and by professionals in the field, or who believes that we have succeeded so long as the retarded are kept busy in workshops or placed on any job, this chapter has little value. For those who believe that there is a substantial gap between how the retarded function vocationally, at present, and how they could function, this chapter contains descriptions of what is being done and what could be done to achieve the goal of maximum opportunity for growth. (50 pages)

9. Gold, M. W. & Barclay, C. R. The learning of difficult visual discriminations by the moderately and severely retarded. Mental Retardation, 1973, 11, (2), 9-11. (3 pages)

   A procedure to effectively and efficiently train moderately and severely retarded individuals to make fine visual discriminations is described. Results suggest that expectancies for such individuals are in need of examination. Implications for sheltered workshops, work activity centers and classrooms are discussed.

10. Gold, M. W. Redundant cue removal in skill training for the mildly and moderately retarded. Education and Training of the Mentally Retarded, 1974, 9, 5-8. (4 pages)

    Thirty-six mildly and moderately retarded sheltered workshop clients learned to assemble a 12-piece unit for which the parts were color coded. Subjects were randomly assigned to one of three groups, each of which received a different procedure for efficiently using and removing the color cue. Subjects who had the cue removed from each part following three consecutive correct discriminations on that part learned the task in the fewest trials. The procedures were presented within the context of a research program designed to apply and implement findings from basic laboratory research on learning and referred to as middle-road research. Implications were given for the application of the procedures used.

11. Gold, M. W. & Barclay, C. R. The effect of verbal labels on the acquisition and retention of a complex assembly task. Training School Bulletin, 1973, 70 (1), 38-42. (5 pages)

    Sixteen moderately and severely retarded individuals learned to assemble a 12-piece bicycle brake and were retested for retention after six months. Performance of the group given verbal cues for the visual discriminations was superior to the performance of the No Verbal Cue Group. A highly significant retention effect was found for both groups.

12. Gold, M. W. An Adaptive Behavior Philosophy: Who Needs It? Revision of a paper published in the Proceedings of the National Association of Superintendents of Public Residential Facilities, Region V, Interaction Workshop on Community Living for Institutionalized Retardates. May 1972, Chicago Illinois. (6 pages)

    This is a brief comment on the need for society to examine its value structures which function to prevent the retarded from enjoying their inherent right to full participation in that society.

13. Gold, M. W. Factors affecting production by the retarded: Base rate. Mental Retardation, 1973, 11 (6), 41-45. (5 pages)

    Retarded individuals, working either one or three hours per day for 10 days, under a no-external reinforcement condition, assembled a 14-piece bicycle brake. Mean production for the one-hour group was 24.9 units per hour per person and for the three-hour group, 20.2 units per hour per person. Error rate was very low for both groups. The data were discussed relevant to presently held expectancies and practices in the vocational training and evaluation field.

14. No longer available.

15. Gold, M. W. Poem: An end to the concept of mental retardation: Oh, what a beautiful mourning. (5 pages, includes #34 and #19)

16. No longer available.

17. Article by Peter Faur, Train, Don't Test. Unpublished manuscript. 1974. (5 pages, includes #39)

    This is a newspaper-type article describing Gold's position on diagnosis and testing with suggestions for alternatives.

18. Gold, M. W. Vocational Skill Development of the Handicapped. (8 pages)

    This is the outline and reading list for a university course of the same name.

19. Gold, M. W. Definition (5 pages, includes #15 and #34)

    This is a rough outline of an alternative definition of mental retardation.

20. No longer available.

21. No longer available.

22. Gold, M. W. Vocational Training. In J. Wortis (Ed.), Mental Retardation and Developmental Disabilities: An Annual Review, Vol. 7, New York: Brunner/Mazel, 1975, Pp. 254-264. (11 pages)

    This is a chapter which focuses on four issues: 1) the importance of work as a means to status in society; 2) follow-up studies; 3) the Testing Movement; and 4) the Competence-Deviance Hypothesis. The issues are presented as critiques of existing practices and the presentation of alternatives.

23. Levy, S. M., Pomerantz, D. J. & Gold, M. W. Work skill development. In N. G. Haring & L. J. Brown (Eds.), Teaching the Severely Handicapped, Vol. II. New York: Grune & Stratton, 1977. Pp. 233-256. (24 pages)

    This chapter provides a current account (1975) of the research on work skill development of the severely handicapped which has been going on at the Institute for Child Behavior and Development (Children's Research Center), University of Illinois at Urbana-Champaign since 1969. The three separate areas covered include pilot work on skill training with young children; pilot work on the acquisition of the necessary skills to assemble printed circuit boards with many components; and a detailed discussion of the concept of job enlargement, from the industrial psychology literature.

24. Gold, M. W. Some Thoughts on Training. Paper published in the Proceedings Manual of The Education and Management of the Behavior-Disordered Child, 5th Annual Meeting and Conference of the National Society for Autistic Children. St. Louis, Mo., June, 1973. Pp. 56-67. (12 pages)

    This transcription includes discussions about labeling, autism, eye contact, a distinction between humanistic and behavioristic psychology, parent training, and evaluation.

25. Gold, M. W. Symposium on Applying Attribution Theory to Social Problems: Vocational Skill Functioning of the Severely Retarded, Paper presented at the American Psychological Association, September, 1975, Chicago, Illinois. (11 pages)

    This is a first attempt to describe and interpret our research from a humanistic psychology perspective, in particular, Attribution Theory, as initially developed by Bernard Weiner.

26. Gold, M. W. & Close, D. W. Five year retention of an assembly task by the severely retarded. Unpublished. (6 pages)

    Eleven of the 16 adults from one of the four sheltered workshops that participated in the first bicycle brake study (See no. 6 above) were retained on the coaster brake after five years (since the one year retention study). The data were almost identical with the one year retention data.

27. Gold, M. W. Task analysis of a complex assembly task by the retarded blind Exceptional Children, 1976, 43, 78-84. (The article, as it appears in the journal, is a much condensed version of this manuscript.) (7 pages)

    The basic structure of the particular form of task analysis developed in our research is presented. The system is then described as it was applied to the training of 21 severely and profoundly retarded blind and deaf-blind individuals on the bicycle brakes.

28. Gold, M. W. Try Another Way and a seven film series on Gold's Task Analysis system. Films produced by Film Productions of Indianapolis. 128 East 36th Street, Indianapolis, Indiana, 46205. Telephone number: (317) 924-5163.

    The films include a philosophy statement (Try Another Way) and a series on training persons who find it very difficult to learn. All arrangements for rentals or sales are made through the producer. Brochure sent free with all orders or upon request.

29. No longer available.

30. Gold, M. W., & Rittenhouse, R. K. Task analysis for teaching eight practical signs to deaf-blind individuals. Teaching Exceptional Children, 1978, 10, Pp. 34-37. (Reprint is 17 pages)

    Eight practical signs for communicating with deaf-blind individuals are presented along with task analyses. The signs are for the following words: toilet, sit, stand, eat, drink, more, enough, stay.

31. The California Project. A brochure describing a staff development contract between Marc Gold & Associates and the State of California. The purpose of the California Project was to enhance life skills of persons with developmental disabilities by teaching the Try Another Way approach to a group of trainers in California. The trainers used this approach and taught it to others. Available free upon request.

32. Gold, M. W. Meeting the needs of the handicapped. Paper presented to the National Bicentennial Conference on Vocational Education, October 11, 1976, Minneapolis, Minnesota. (10 pages)

    Issues related to normalcy, mainstreaming, right-to-education, vocational education of the severely handicapped and future possible trends are discussed.

33. Wade, M. G., & Gold, M. W. Removing some of the limitations of mentally retarded workers by improving job designs, Human Factors, June 1978, 20, (3), Pp. 339-348. (10 pages)

    The traditionally low level of expectancy of persons with moderate, severe or profound mental retardation in industrial work settings is reviewed from a human factors viewpoint. A case is made for interfacing the worker with

retardation into the man-machine system by evaluating performance in terms of information processing ability. Data are reviewed which suggest that there are many industrial tasks at which such workers can perform well and earn a wage comparable to his nonretarded co-worker. The issue of training workers versus screening workers is discussed as an additional factor in maximizing the role of workers with retardation in industry. The view of the worker with retardation as a communication channel and his ability to process information is regarded as a central issue when discussing the optimization of the man-machine interface. A distinction with respect to task analysis is made between task difficulty and task complexity. Variations in one or the other have important implications for these workers, when traditionally engineering and experimental psychology have not seen fit to make such distinctions.

34. Gold, M. W. & Gold, R. S. Mealtime. In R. Perske (Ed.), Mealtimes for Severely and Profoundly Handicapped Persons. Baltimore: University Park Press, 1977, Pg. 3-4. (5 pages, includes #15 and #19) Poem

35. Gold, M. W. & Pomerantz, D. J. Issues in prevocational training. In M. Snell (Ed.) Systematic Instruction of the Moderately and Severely Handicapped. Columbus, Ohio: Charles E. Merrill, 1978, Pg. 431-440. (15 pages)

    This chapter describes the concepts of vocational and prevocational training. It also lists program guidelines intended to help educators determine whether their prevocational programs can meet the needs of their handicapped students. In addition, detailed descriptions of content task analysis, information and judgment are included.

36. No longer available.

37. No longer available.

38. No longer available.

39. Article by Barry Moline, Everyone squeezes out goodness. Campus newspaper editorial describing Gold's toothpaste analogy. (5 pages, include #17)

40. Article in Business Week Magazine, Industrial Edition, No. 2559, November 6, 1978. Article is entitled "Real Jobs for the Retarded;" it describes the Try Another Way approach and how it has been used to train retarded citizens for job placements. (5 pages)

Marc Gold & Associates, Inc.

"The people who try another way..."

Marc Gold & Associates, Inc. (MG&A), was incorporated in 1976 in order to provide a mechanism for governmental, private and other organizations to gain access to the educational technology known as Try Another Way.

The activities of MG&A include the following:

1. Conduct three-day training conferences at which the philosophy and technology of Try Another Way are explained and demonstrated.

2. Conduct or coordinate other professional conferences in any number of fields.

3. Provide a wide variety of training services, as described on the following page.

4. Distribute task analyses, reports, manuals, articles, brochures, sample contracts, etc.

5. Provide other individualized training activities or programs specifically designed at the request of an agency, organization or individual. There are no non-negotiable items at MG&A.

If you are interested in any of the above activities, or desire to obtain more information about them, please contact:

Darryl R. Townsend
Marc Gold & Associates, Inc.
Texas Office
P. O. Box 5100
Austin, Texas 78763
(512) 451-8079 If no answer:
(512) 477-1610

To contact the home office of MG&A, to discuss programmatic issues or contracts, please contact:

Marc Gold or Steve Zider
Marc Gold & Associates, Inc.
708 West Oregon
Urbana, Illinois 61801
(217) 384-4314

Training Services Available

Marc Gold & Associates, Inc.

In an effort to meet the needs of individuals desiring to be trained in Try Another Way, MG&A provides a number of training packages. These programs range from short, introductory sessions to long-term extensive training programs. They are of three varieties:

1. Short sessions designed to orient people or expose them to the Try Another Way approach
   Length - 1, 2 or 3 days
   Material covered - Overview of TAW, the TAW philosophy, task analysis, working relationships with clients, reinforcement, and other similar topics
   Maximum number - Unlimited, depending on capacity of room

2. Short-term training programs designed to provide initial training to people who desire to use the Try Another Way approach with clients
   Length - 1, 2, 3, 4 weeks
   Material covered - All overview material, plus basic training in writing task analyses and using those task analyses to train clients; using TAW instructional and reinforcement techniques
   Maximum number - Around 12 participants, per trainer, per session

3. Long-term training programs are designed to provide comprehensive training in every aspect of the TAW approach. These programs are intended to bring participants to criterion as trainers of clients, and, in some cases, enable participants to reach criterion as a trainer of trainers.
   Length - 1 - 5 years
   Material covered - All aspects of the TAW program
   Maximum number - Unlimited, depending on the number of MG&A coordinators used on the project

In addition to these programs, MG&A is now available to accept contracts in the following areas:

1. Criterion-Referenced Assessment Package - a comprehensive program designed to provide realistic assessments of clients on tasks of the agency's choosing, establish a criterion level at which the client is to perform, and provide the training to move him/her from the current position to the goal.

2. Workshop Management Services - comprehensive endeavors in which MG&A assumes the role as workshop manager, organizes the shop in accordance with TAW specifications, secures contracts, trains staff, and operates the program until criterion is reached. Variations of this service provide similar activities without assuming the role of workshop manager.

3. Direct training and placement services for those labeled handicapped. Under this program, MG&A identifies potential industrial jobs, trains clients to assume those jobs, facilitates the integration of the handicapped worker, trains the regular staff to accommodate the new employee, and provides follow-up training as necessary.

COST EFFECTIVENESS INFORMATION

Extending Methods of Rehabilitation is a project in Salem, Oregon. It is funded from a Governor's Discretionary Grant administered by the Manpower Planning Division. It is also a CETA Title I program, meaning all applicants must meet Title I eligibility requirements. The project primarily serves persons who might be categorized as educable mentally retarded by assisting them to secure full-time employment. Referrals are interviewed by a vocational trainer in a low-key manner, eligibility and desire are assessed, and a short checklist of observable skills is completed. Applicants are then enrolled in a two-week job search skills seminar, for which they are paid a training allowance. Material presented in the course is found in a 180 page manual and includes every aspect of finding and securing a job. After completing the course, applicants are given specific job search assignments. They are assisted, only on an "as needed" basis by the project's vocational counselor. When a placement is secured, the counselor's role changes from that of a follow-along to a follow-up person. A task analysis is done on the job, if necessary, and any on-site work adjustment counseling is provided.

At the end of the first year, October 1, 1976 to September 30, 1977, 227 people had received service; 128 of those were placed in competitive employment and 27 were enrolled in specific vocational training programs. The cost was $143,832, or $633.62 per client. A cost effectiveness study indicated that the money saved in public assistance and the money paid in taxes by working clients more than paid for the project. For the second year, by August 15, 1978, an additional 475 participants had received services, 230 of whom had been placed into employment. The second year cost of the project was $259,400. It was estimated that $420,000 was returned to the system in taxes paid and public assistance monies saved. This accounts for a net gain to the public of approximately $160,000. Plus, 358 people had the dignity of competitive employment. For additional information contact Robert Brazeau, at the Oregon Association for Retarded Citizens (which operates the project), Extending Methods of Rehabilitation, 3085 River Road North, Salem, Oregon 97303, (503) 390-0330.

FILM TRAINING SERIES

A series of seven training films, plus an overview film entitled "Try Another Way," have been produced and are now available. The purpose of the film series is to provide interested individuals with ready access to the concepts and techniques of the Try Another Way training technology. The following is a list of the films by title, a short annotation, and the length.

"Try Another Way" captures the essence of Marc Gold's philosophy and his work, and serves as an introduction to the Training Series.

Film #1 - "TASK ANALYSIS: An Introduction To a Technology of Instruction" (18 min.)

Dr. Gold show the importance of the trainer knowing the task he is to teach, and being able to break it down into teachable components. Using different formats, Marc works with preschool children learning to build with blocks, to use screwdrivers and to recognize coin values. Marc discusses Criterion, Data Collection and the Seven-Phase Sequence for doing a Complete Task Analysis.

Film #2 - "CONTENT AND PROCESS: Two Components of Task Analysis" (12 min.)

How do you subdivide steps that are not teachable? In the second film Dr. Gold states, "'Teachable' is determined by the skills of the teacher and those of the learner." Marc trains two people learning to assemble electronic circuit boards, showing that, though the subdivision of steps may be difficult for each person, the result is the same. What do you do when a learner doesn't learn? In the answer to this question lies the real strength of his system.

Film #3 - "FORMATS FOR SINGLE PIECES OF LEARNING: Subcategories Of Process Task Analysis" (13 min.)

Match to sample? Oddity? Paired associate learning? How do you present the task? Marc explains these formats and demonstrates their use. He also covers recognition and recall, successive and simultaneous presentation. With demonstration and his unique whimsical style, Marc details the intricacies of teaching single pieces of learning.

Film #4 - "FORMATS FOR MULTIPLE PIECES OF LEARNING" (22 min.)

In this film Dr. Gold explains his bag of trics and covers Multiple Pieces of Learning: 1) Forward chaining 2) Backward chaining 3) Total task presentation and 4) Organized exposure with feedback. He shows that much of what we learn consists of pieces of information having logical connections to one another. As an example, the Total Task Presentation is demonstrated in the mobility training of a blind person with profound retardation.

Film #5 - "FEEDBACK -- GENERAL ISSUES" (20 min.)

"Feedback means letting the learner know what is wanted of him and if he is achieving it." Dr. Gold proceeds to explain the many facets of this concept in film 5. Feedback: Reinforcement; Concurrent, Terminal; Immediate, Delayed; Verbal and Nonverbal are all discussed. Feedback is demonstrated by trainers working with deaf-blind children.

Film #6 - "FEEDBACK -- SPECIFIC ISSUES" (15 min.)

Dr. Gold discusses five specific rules "that should be sitting on the shelf of your mind ready to be brought into play on a second-by-second basis." The rules are intended to provide the trainer with some of the power needed during on-the-spot decision making. An experimental program using a driving simulator shows one of the rules in action with a learner with severe mental retardation.

Film #7 - "REINFORCEMENT AND INFLUENCE" (15 min.)

Most trainers rely almost exclusively on some kind of reinforcement system as the primary source of power for training people. Dr. Gold argues that through artificial reinforcement, trainers often further handicap their clinets. He reveals his "no news is good news" concept and explores Process Influence and Content Influence in this most thought-provoking film.

The films have been priced to enable the greatest number of people to have the resource on hand.

1. The Library: (8 films) "Try Another Way" and the seven Training Films. Total price of $1,500.00 -- a savings of $400 compared to individual purchase prices.

2. The Training Series: (7 films) Training Films 1 through 7. Total price of $1,200 -- the average cost of each film when ordered as a package is $171.43. The entire series can be rented for $300.00, 14 days door to door.

3. Individual Training Films: You may order the films individually. Cost is $225 each. Training films can be rented individually for $50.00, 10 days door to door.

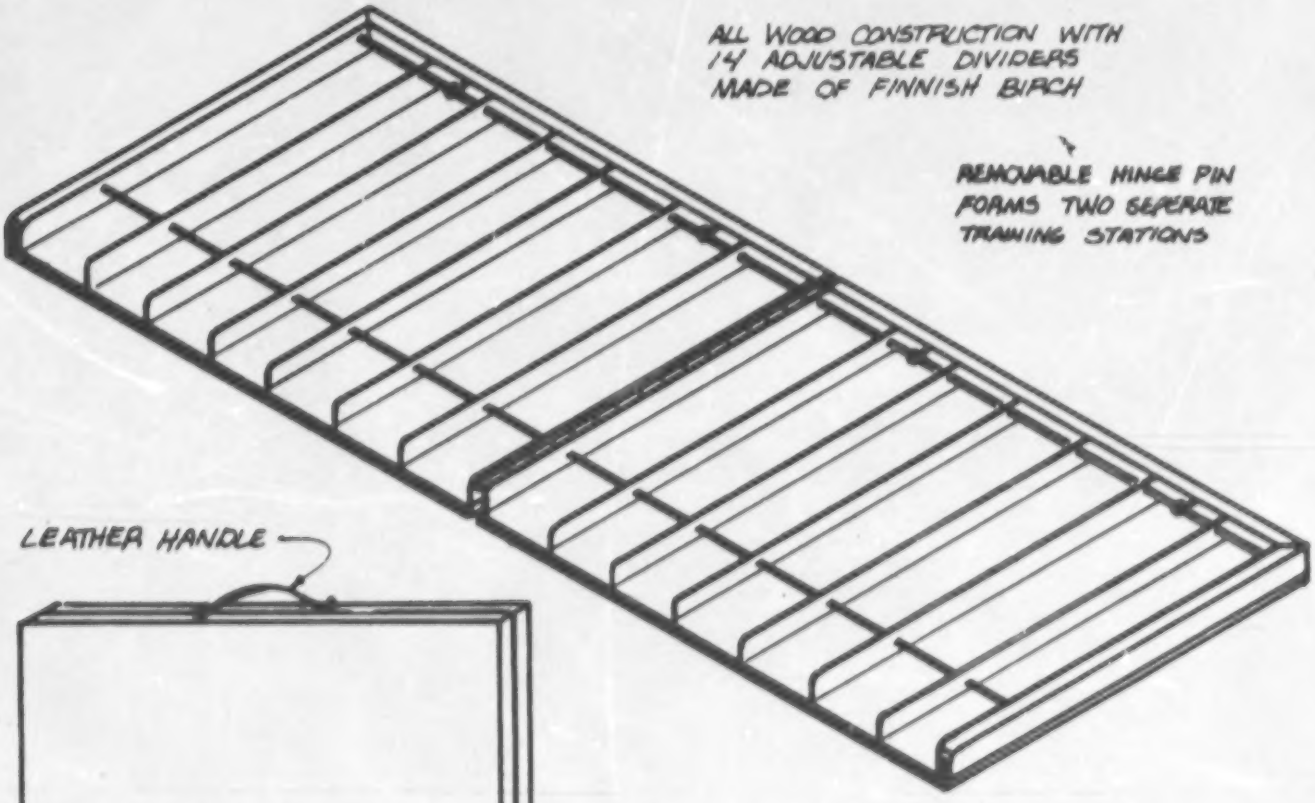
4. "Try Another Way" can also be purchased individually. Cost is $325.00. The film can be rented for $75.00, 10 days door to door.

5. Video tape cassettes are available upon request. The prices are the same as those for the films.

All films are packaged in self-mailing, plastic shipping cases. These films are not the property of MG&A. They are <u>not</u> sold, rented or distributed through MG&A. For more information about the films, or to discuss purchase or rental of the film library, please contact:

Film Productions of Indianapolis
128 East 36th Street
Indianapolis, Indiana 46205
(317) 924-5163

Training Boards



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UKIAH, CALIFORNIA 95482

PHONE (707) 462-7593

INFORMATION REGARDING PEOPLE FIRST

For information on the film, contact:

The Stanfield House
P. O. Box 3208
Santa Monica, California 90403
(213) 820-4568

	Short Version	Long Version
Purchase Price:	$350, plus shipping costs	$450
Rental Price: (2 days in hand)	$35	$50

For information regarding the People First Self Advocacy Movement, or People First conferences, please contact:

Ms. Valerie Schaaf
4488 Liberty Road South
Salem, Oregon 97302
(502) 364-6982

OTHER RESOURCES

American Association for the Education of the Severely and Profoundly Handicapped
(AAESPH)
1600 West Armory Way
Garden View Suite
Seattle, Washington 98119
(206)283-5055

American Assocation of Mental Deficiency
5101 Wisconsin Avenue NW
Washington, D.C. 20016
(800)424-3688

The Council for Exceptional Children
1920 Association Drive
Reston, Virginia 22091
(800)336-3728

Project MORE
George Peabody College
Box 318
Nashville, Tennessee 37203

* The National Institute on Mental Retardation
Kinsman NIMR Building, York University Campus
4700 Keele Street, Downsview (Toronto)
Ontario, Canada, M3J 1P3
(416)661-9611

*Sponsored by The Canadian Association for the Mentally Retarded

MG&A Article Order Form

To order any of the articles described on pages 55-60 of this manual, please complete the bottom half of this page, detach and send to: Marc Gold & Associates, Inc., P. O. Box 5100, Austin, Texas 78763. Payment must accompany orders of less than $25.00. Orders in excess of $25.00 can be billed with authorized voucher or purchase order. Please order by the following numbers:

1. - Preworkshop skills
2. - NLA*
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5. - Discrim. learning
6. - Stimulus factors
7. - Relevant experiences
8. - Research on voc. rehab.
9. - The learning
10. - Redundant cue removal
11. - Effect of labels
12. - Adap. beh. phil.
13. - Factors affecting
14. - NLA
15. - Poem
16. - NLA
17. - Train, don't test
18. - Voc. skill dev.
19. - Definition
20. - NLA
21. - NLA
22. - Vocational training
23. - Work skill development
24. - Thoughts on training
25. - Attribution theory
26. - Retention study
27. - Task analysis
28. - TAW films
29. - NLA
30. - Task analysis for signs
31. - The California Project
32. - Meeting needs of hand.
33. - Removing limitations
34. - Poem
35. - Prevocational training
36, 37, 38 - NLA
39. - Squeezing goodness
40. - Jobs for the retarded

COSTS ARE AS FOLLOWS:

1. Any single article, ordered individually
   - Short papers (1-8 pages) $ 2.00
   - Medium papers (9-17 pages) 3.00
   - Long papers (18 pages or more) 4.00
2. Any five articles or more. 75% of the individual cost of the articles
3. All articles. 55% of the individual cost of the articles that are available

*NLA - No longer available

MG&A Order Form

Please send the following order to:

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Address, Zip_____

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_____5 or more articles. Please specify numbers.

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P. O. Box 5100
Austin, Texas 78763

Subtotal: _____
TX Residents Only- Add 5%: _____
Postage:Add 10% of Subtotal: _____
Total Amount: _____

_____ Amount Enclosed_____

_____ Bill me (for orders over $25)
Authorized voucher enclosed

MG&A

(MARC GOLD & ASSOCIATES, INC.)

PROVIDES ASSISTANCE IN YOUR EFFORTS TO TRAIN THOSE WHO FIND IT DIFFICULT TO LEARN WITH TASK ANALYSES OF DAILY LIVING SKILLS AND VOCATIONAL TASKS

AN MG&A TASK ANALYSIS is a step-by-step description of the training activities involved in teaching a certain task or skill to a specific person or group of people who find it difficult to learn. It describes a training procedure which results in there being sufficient power for a learner to acquire a skill or task.

THE TASK ANALYSES average five pages with some containing over 20 pages. Each task analysis contains the following: a. task name, b. authors, c. a description of the kind of learner(s) for whom it was written, d. entering behavior(s), e. a task description, f. the purpose, g. the criterion, h. equipment or materials needed, i. the content task analysis (the steps that the person learns), j. the process task analysis (what the trainer does), k. feedback procedures, l. data collection sheet(s), m. descriptions or diagrams to explain the task (if necessary).

OVER 650 TASK ANALYSES ARE AVAILABLE FROM MG&A. These task analyses have been developed by participants in MG&A training projects in California, Georgia and Massachusetts, as well as by MG&A staff members. New analyses are being added regularly as they are completed and tested. In order to be included on the list of available tasks, the analyses are reviewed for adherence to technical standards and are then used to successfully bring a client to a predetermined criterion level. If criterion is not reached, the analysis is revised until criterion is reached or until a decision is made to withdraw that particular analysis.

BOTH SECTIONS OF THE TASK ANALYSIS LIST have been broken down into convenient categories. The categories for daily living skills include academics, communication, dressing, eating, housekeeping, hygiene, kitchen skills, leisure activities, mobility skills, motor skills and miscellaneous. Included in the vocational skills list are assembling, carpentry, crafts, folding and collating, labeling, maintenance, packaging, operating specialty and workshop equipment, office skills, service station and auto care, sorting, specialty skills and miscellanous.

TO ORDER, use the attached list of available task analyses. The task analyses have been assigned a code number, which precedes the name of the task. Please use this code number when ordering the analyses you desire. Also, please sequence the numbers for the analyses you are ordering. **PAYMENT MUST ACCOMPANY ORDERS OF LESS THAN $25.00.** Sales tax is charged for Texas residents only. Make all checks payable to Marc Gold & Associates, Inc. Cash is accepted, but you are discouraged from sending it through the mail.

A FEW CAUTIONS should be observed with respect to the task analyses:

1. Each task analysis, when it was submitted for inclusion, contained data sheets showing that the analysis (content and process) did bring at least one client to criterion. The analyses, however, have not undergone extensive field testing as one might expect of commercial curricula.
2. Since some of the analyses were written for unique learning styles or to accommodate certain handicaps, they should be considered as guides that will need some local modification, rather than finished products that could be used upon receipt.

3. The analyses were written with the assumption that the users were familiar with the language and structure of the Try Another Way approach. Terms common to the system are left undefined. The Try Another Way Training Manual defines the terms and provides background information on the system.

THREE OTHER ITEMS are also available:

1. *Try A Hundred Ways—The Joy of Training.* This volume contains 100 task analyses; 50 vocational tasks and 50 daily living skills tasks. Task analyses were selected that offer wide variety on a number of criteria. This 710-page volume also contains a copy of the Try Another Way Training Manual used at conferences (which normally sells for 4^{00}) and a complete list of task analyses. The cost is 60^{00}.
2. *The Try Another Way Training Manual.* This manual is provided at all conferences. The 68-page booklet has articles, definitions, bibliographies, references, explanations, and information. The cost is 4^{00}.
3. *Try Another Way in California.* This is the final report of The California Project. The 125-page, bound volume contains considerable information and data related to this two-year project. It can also serve as a model for training programs. The cost is 5^{00}.

THE PRICES for the task analyses vary depending on the number purchased. They are as follows:

a. 2^{00} each, if ordering 4 or less.
b. 1^{50} each, if ordering 5-14.
c. 1^{25} each, if ordering 15-24.
d. 1^{00} each if ordering 25 or more.
e. 37^{50} for a pre-packaged set of 50 daily living skills (averages $.75 per analysis).
f. 37^{50} for a pre-packaged set of 50 vocational skills.
g. 60^{00} for Try A Hundred Ways (averages $.60 per task analysis).

THANK YOU FOR YOUR INTEREST. We hope the task analyses will be a great resource to you. New task analyses are regularly being added to our files as they are developed in MG&A training projects. Be sure to check periodically with this office for an updated list. If there is anything else we can do for you, or if you desire information regarding the conferences, in-service training programs or the assessment packages available from MG&A, please contact Darryl Townsend at the Texas Office of MG&A, P.O. Box 5100, Austin, Texas 78763; (512) 451-8079 (if no answer, call (512) 477-1610).

COMPLETED TASK ANALYSES
AVAILABLE THROUGH
MG&A
NOVEMBER, 1978

VOCATIONAL

Assembly, Preassembly, Disassembly or Subassembly

0064 Actuator
0457 Actuator
0233 Actuator #289-718
0009 Adapter
0049 Anti-Freeze Saver Kit
0257 Backplane
0001 Bail & Band for Bottles
0073 Ball Point Pen
0002 Battery Tester
013e Bellows, Steam Iron (sub)
0453 Bicycle Brake
0078 Blades
0021 Block and Bolt
0128 Body: Steam Iron Water Pump (sub)
0154 Bolt and Washer
0291 Box (assembling & stamp)
0317 Boxes (gluing)
0220 Buckle (42") Strap
0209 Bus Bars (dis)
0124 Cap: Steam Iron Water Pump (sub)
0047 Capacitor Assembly (pre)
0003 Caps and Adapter
0150 Caribou Mountaineering Toggle Strap
0151 Caribou Mountaineering Buckle Straps
0152 Caribu Mountaineering Zipper Pulls
0580 Case Lube 6-Pack
0267 Catalogue
0456 Coda Communication Electronics
0510 Computer Band
0459 Control Bracket
0414 Crystal Necklace
Datamate 100
0024 Fuse Holder Prep.
0450 Mechanical Assembly
0443 Electrical Assembly
0305 Lampholder Assembly
0445 Tie-Wrap Anchors and Ties
0444 Switch Removal
0142 Donner Box #125
0265 El Fab Electronics
0118 Electrical Extension Switch (and wiring)
0165 Enema Bucket
0008 Eye Dropper
0199 Felt Tip Pen
0143 Flashlight
0043 Flashlight
0170 Flashlight
0283 Flat Bottom Solenoid
0127 Flextube & Cap: Steam Iron Water Pump (sub)
0604 Frames for Bird Feeders
0670 Funbrellas
0321 Fuse Holder (assembly & dis)
0293 40/80-VHP
0464 Galaxie Camera Gift Kit
0298 Galaxie Camera Mailing Carton
0461 Galaxie Camera Paper Packet
0465 Galaxie Camera Standard Pack
0563 Gift Tags
0125 Glass Tube: Steam Iron Water Pump (sub)
0081 Grocery Stamper (dis)
0140 Grocery Stamper
0149 Hanger Brackets
0509 Idler and Arm
0077 Jamb Bracket
0004 Kite Harness
0033 Lamp Chassis
03o7 Lamp Chassis 1400 Series (Electronic)
0508 Lavender Top
0575 Lock Ring
0535 Logic Manuals for 3410/3411 machine
0370 Macrame Key Chain
0571 Mail Box Fronts
0403 Mailer Box
0276 Meat Slicer (dis)
0168 Memo Pad
Microfiche Reader
0033 Mechanical Assembly
0307 Electrical Assembly
0025 Power Cord Prep.
0158 Shrink Tube
0192 Inspection
0544 Mini Tape Planter
0041 Miniature Golf Course
0135 Mixer (Hobart, Power)
059e Motor Flush Unit
0264 Newspaper Pillow
0063 Nipple
0527 Non-refillable Ink Pens
0388 Nut, Washer, and Bolt
0210 O-Ring Coupling
0094 O-Ring in Coupling
0290 Packing Boxes
0481 Phone Receiver (dis)
0147 Plastic Slides (closet door)
0545 Pop-up Sprinkler
0310 Power Supply Chassis
0574 Primer Tray
0554 Prodelin
0558 Prodelin Coupling
0560 Prodelin Coupling
0211 Projector Screen
0032 Rainbird Sprinkler
0487 Rattan Bunch Table
0156 RCBS Rod & Keeper
0268 RCBS Bolts & Washer
0046 RCBS Power Trickler
0319 Redwood Planter
0361 Sailboat Winch
0566 Sandpaper Block
0179 Schlage Backsets
0034 Screw Pivot
0057 Ship in a Bottle
0628 Shipping Boxes (for Wind Chimes)
0353 Shipping Cartons
0016 Shower Head
0068 Shredder (Hobart, Power)
0423 Simpkins Color Card
0362 Single Cylinder Deadbolt Lock
0025 Single Rose Box
0052 Skateboard
0331 Skateboard Wheel
0458 Slide Plate
0553 Spin-o-Lok
0555 Spin-o-Lok
0080 Spreader Body: Steam Iron Water Pump (sub)
0092 Sputum Collection System Kit
0249 Strap Assembly (cutting square ends on strap)
0250 Strap Assembly (cutting strap to length)
0251 Strap Assembly (swage tip on strap with kick press)
0252 Strap Assembly (rivet & buckle)
Terminal Strips (building)
0398 Kit 2-A
0395 Kit 2-B
0396 Kit 2-C
0397 Kit 2-D
Terminal Board (build)
0383 Kit 3A
0384 Kit 3-B
0385 Kit 3-C

0288 3-M Packing Carton
0259 36 Jumper with Bus Bar
0216 Tie Bar and Bail
0058 Top Slides
0552 Trophy (use rachet wrench)
0011 Tube and Clamp
0193 Turnbuckle
0289 Two-Loop Bow
0161 Wheel Pivots
0329 Wooden Chain Links
0622 Wood Frames (for ceramic tiles)
00e1 Zee Medical Kit

Carpentry/Unholstery

0441 Air Powered Staple Gun (disconnecting, loading, reconnecting)
0442 Cardboard Stripping Dispenser (load)
0155 Caps for Waterbed (make)
0106 Carrier (painting)
0617 Ceramic Tiles (staining)

Carpentry/Upholstery (cont'd)

0111 Corners of 2-sided Caps (finishing)
0479 Dowels (sawing)
0666 Ends (cutting)
0044 End Blocks for Waterbed (drilling)
0439 End Pieces for Waterbed (finishing)
0116 Forty-five Degree Cuts on 3-sided Caps with Radial Arm Saw (making)
0231 Furniture (refinishing)
0113 Lumber caps (building)
0112 Pallets, 3 over 4 stringers (building)
0488 Rattan Furniture (clamping)
0489 Rattan Furniture (nailing)
0230 Rattan Furniture (stapling, cutting and wrapping)
0568 Rattan Furniture (wrapping)
0599 Rattan Furniture (wrapping joints)
0566 Sandpaper Block (assembly)
0218 Seats for Bench Caps (make)
0438 Side Boards & Headpieces for Waterbeds (upholster)
0437 Three-sided Waterbed Caps (upholstering)
0266 Three-sided Waterbed Caps (upholstering)
0440 Waterbed Upholstered Side Caps (belt straight ends)
0542 Wood Blocks (branding)
0565 Wood Blocks (sanding)

Crafts

0407 Basket (weaving)
0515 Bisque (washing)
0301 Clay (wedging)
0072 Clay (cutting for wind chimes)
0036 Clay Beads (making)
0435 Clay Pieces (inspecting-quality control)
0026 Clay (rolling)
0451 Ceramic Glazing (brush)
0213 Floor Loom (using)
0432 Greenware (cleaning)
0131 Hand Glazing
0303 Kiln (washing)
0305 Kiln (loading)
0304 Kiln (unloading)
0300 Kiln (firing) #2
0302 Kiln (firing) #1
0586 Lap Loom (threading)
0286 Lap Loom (weaving)
0083 Loom (using)
0198 Macrame (tie square knot and alternate square knot)
0454 Macrame Plant Hanger
0392 Paint Brush (cleaning)
0447 Porcelain Necklace (measuring & cutting cord)
0054 Redwood Baskets (banding)
0401 Rug (hooking)
0610 Rug (hooking)
0614 Rug Hook Yarn (cut)
0060 Slip Knot (tying)
0005 Square Knot (tying cord)
0307 Stilts (cleaning for wind chimes)
0404 Wind Chimes (cut big tops)
0403 Wind Chimes (cut small tops)
0071 Wind Chimes (glazing)
0402 Yarn (cut for rug hooking)
0585 Yarn (cut for lap loom)

Folding/Collating/Bundling

0427 Beckman Bag (folding)
0085 Binder (filling)
0183 Binder (filling with collated materials)
0162 Boxes for Lindy Pens (fold)
0070 Collating
0455 Cookbook (collating)
0505 Forms (collating & stapling)
0534 Gift Tea Box (folding)
0582 Instructions (folding)
0018 Keystone Boxes (folding)
0425 Labeled Sheets (collating)
0055 Mail (bundling)
0462 Mailers (folding)
0115 Newspapers (folding)
0405 Newspapers (folding for wind chimes)
0006 Newspapers (stacking)
0364 Newspapers (strapping)
0424 Picture (folding)
0024 "Plantronics" Box (folding)
0132 Restaurant Cards (collating)
0605 Rohr Papers (collating)
0485 Surgical Rubber Gloves (folding)

Labeling

0223 Acticarb Bottles
0224 Bacon Packages
0578 Bullet Lubricant
0613 Buttons
0178 Casserole Cover
0448 Labels on Plastic Bags (stapling)
0225 Plastic Envelopes
0123 Purchase Order Log Books (stamping)
0629 Shipping Boxes (for wind chimes)
0562 Simple Green Soap
0539 Soap Boxes
0332 Soft Drink Cartons (labeling & packaging)
0559 Spline Boxes (labeling, boxing, taping)
0059 Zee Medical First Aid Kits

Maintenance

0518 Dual Toilet Paper Dispenser (refilling)
0516 Gas Powered Mower (starting)
0306 Hoe (sharpening with file)
0428 Lawn Mower (change oil)
0429 Lawn Mower (operation)
0532 Lawn Mower Filter (clean)
0274 Mirrors (cleaning)
0245 Paper Towel Dispenser (fill)
0263 Push Broom (using)
0146 Towelsaver #S-6 Dispenser (loading)
0517 Tractor Mower (starting)
0171 Windows (washing)

Packaging

0581 Accessory Handle
0316 Ammonia Inhalants
0217 Antibiotic Ointment
0037 Axle Boot
0014 Bandages
0105 Blister Packing
0148 Bonn Picture Hangers
0572 Canopy Lamp Parts
0197 Card Loading (skin packaging)

Operating Specialty Equipment

0159 A.B. Dick Offset Master and Converter
0662 A.B. Dick Manual Ditto Machine
0531 Aerator
0411 Auto-Vance Machine
0590 Bag-o-Matic (sealing bags)
0181 Beckman Bags (sewing)
0588 Bell & Howell Projector
0466 Bell & Howell Overhead Projector (setting up)
0134 Bell & Howell Projector (load)
0108 Bike Wheel Truing Machine
0567 Blow Torch
0406 Ditto Machine
0475 Dry Chemical Fire Extinguisher (using)
0474 Film Projector Screen
0328 Fire Extinguisher
0480 G.E. Spray-Pump Test Machine
0269 Language Master
0163 Rolling Machine for Clay Slabs (for wind chimes)
0498 Singer Movie Projector
0470 Slide Projector
0176 Spline (operation: screen retainer)
0642 Spray Paint Gun
0325 Tape Recorder
0354 Twist Machine
0533 Verticutter
0161 Wheel Pivots
0188 Casserole Covers
0315 Cotton Tip Applicators
0561 Eye Drops
0446 Finished Items (count & box)
0621 Frames (boxing for ceramic tiles)
0212 Jump Rope
0189 Lock Cylinder Pins (weighing and packaging)
0391 "Make-a-Plak"
0347 Masterbagging
0258 Match Book
0297 Matchbook Caddy
0019 Package (wrapping)
0663 Packaging I (Redwood Baskets)
0664 Packaging II (Redwood Baskets)
0557 Packaging and Stapling
0390 Patriotic Pluggie
0600 Peds
0079 Pet Medallion (insert on key ring & package)
0017 "Poolmaster" (Screws and Tubes)
0579 Powder Funnels
0153 Powder Measure Parts
0194 Pre-Loaded Sheets (skin packaging)
0238 RCBS Basic Cases .45 Caliber
0065 RCBS Case Lube Box
0237 RCBS Decapping Pins
0110 RCBS Plug, Sleeve, and Nut
0239 Resizing, Lubricant Tubes
0012 Rubber Band and Safety Pin (package and box)
0577 Scale Covers
0062 Scissors (25)(bagging)
0352 Screws (bagging)
0157 Sheet Exit Guides (cutting plastic mold, bagging)
0593 Skateboard Wheels
0219 Sleeping Bag Straps
0195 Smorgas Birds (boxing)
0333 Soft Drink Cartons (counting & packaging)

Operating Specialty Equipment (cont'd)

0221 Stuff Packs
0597 Toggle Switches (blister packing)
0595 Totem Blocks
0096 Tourniquets (wrap & box)
0098 Toy Goodyear Blimp Motor Components
0431 Wind Chimes

Operating Standard Workshop Equipment

0350 Automatic Heat Sealing Machine
0483 Band Sealer
0232 Counting Scale
0406 Ditto Machine
0480 Drill Press
0234 Drill Press (threading metal plates)
0667 Drill Press
0056 Engraver
0372 Fluid Duplicator
0366 Folding Machine (load)
0126 Hand Staple Gun
0076 Heat Sealing Machine
0207 Hole Punch
0038 Karate Hand Sealer
0607 Metal Band Saw
0623 Router
0089 Sanding Machine
0133 Shadowgraph (use)
0084 Shrink Wrap Machine
0091 Shrink Wrap Machine
0173 Shrink Wrap Machine (seal baskets)
0197 Skin (packaging) and Card (loading)
0010 Skin Packaging Machine
0194 Skin Packaging Machine (operate)
0050 Tape Machine to Tape Boxes
0222 Weighing, Bagging, and Sealing (use heat sealer)
0379 Xerox 4000 (operation)
0380 Xerox 4000 (collate and staple)
0381 Xerox 4000 (recording)
0547 Xerox 4000 (operation)
0615 Xerox Machine

Office Skills

0506 Carbons (inserting)
0504 Letter (fold, insert and close envelope)
0576 Manual Stapler (load & use)
0280 Pencil (sharpen)
0341 Pencil Sharpener (use)
0640 Portable Pencil Sharpener (use)
0123 Purchase Order Log Book (stamp)
0630 Stapler (filling)
0093 Stapling
0241 Tape Dispenser (filling)
0082 Telephone (answering)

Service Station/Auto Care

0546 Auto Engine Oil (check)
0229 Auto Oil (check and fill)
0641 Battery (charging)
0203 Car Battery (check and fill)
0201 Service Station Cash Box-Cash, Gas Only (using)
0182 Service Station Cash Box, Using Credit Card, Gas Only Under $20.00 (using)
0202 Gas Pump (use)

Sorting

0493 Black & White Pegs
0584 Buttons (sort & match)
0549 Cans
0369 Drills
0117 Envelopes (open & sort)
0015 Food Coupons
0669 Slats
0512 Washers, Nuts, Lockwashers

Specialty Skills

0606 Adapters (inserting)
0639 Aluminum Cans (crushing)
0417 Auto Crimp (solder)
0368 Bag Headers (stapling)
0346 Base Tube for Actuator 289-718 (pre-load)
0086 Bike Hub (lacing)
0109 Bike Wheel (lacing)
0348 Bit Adapters (insertion of springs)
0543 Boxes (lifting)
0174 Brass Coupling onto Hoses (insertion)
0570 Canopy Lamp Parts (inspect)
0415 Centrifugal Blade Wire (stripping)
0589 Circuit Board Assembly (stuffing)
0598 Circuit Board Components (soldering)
0045 Cleats (stacking)
0416 Collated Pages (flat stitch)
0633 Cord (measure & cut for porcelain necklace)
0556 Cotton Swabs (brush line operation)
0028 Crown Nuts and Bolts (weighing)
0351 Cutting Sleeving (brush line operation)
0040 Cutting Tool (operate Strickman cutter)
0569 Door Handles (cutting)
0175 Drainage Hoses (crimping sleeve)
0120 Ektalon Racket (stringing)
0013 Electrical Housings (filing and deburring)
0039 Electrostatic Terminal Blocks (modifying)
0320 Fuses (flipping)
0625 Grey Power Cord (prep)
0137 Grocery Stamper (boiling)
0101 Grocery Stamper (cleaning)
0100 Grocery Stamper (repair)
0031 Helicoils into Fuel Cells for Jet Range Helicopters (insertion)
0389 Hose Washers (mounting)
0626 Insulated Crimps (fastening)
0536 Integrated Circuits (loading into carriers)
0180 Integrated Circuits (removal from carriers)
0602 John Hancock Seats (grommetting)
0317 Key Boxes (gluing)
0413 Karvings (reinforcing material upper)
0448 Labels (stapling)
0023 Labels (stringing)
0655 Lamp Cord Ends (soldering)
0656 Lamp Cord for Coded Communications
0586 Lap Loom (threading)
0272 Lock (closing)
0243 Lock (opening with a key)
0192 Metal Lamp Chassis Inspection
0119 Neck Slides to Nylon Cords (attach) (Snake Bite Kit)
0191 Pick up and transport 25 lb. box
0603 Pipe (swedging)
0573 Poly Bags (sealing)
0537 Printed Circuit Boards (inspect)
0552 Rachet Wrench (using)
0564 Ratio Scale (weigh counting)
0107 Raytheon Inlines (cutting)
0665 Redwood Planter Boxes (dip)
0421 Redwood Planter Liner (stapling)
0090 Road Tags (string tying)
0363 Rohr Wire (twisting)
0164 Rose Vials (taping)
0324 Round Tubing (punch holes)
0167 Rubber Tubing on Metal Rod (inserting)
0614 Rug Hook Yarn (cutting)
0473 Shield (fuses) (inserting)
0158 Shrink Tube Cutting (Lamp Chassis)
0262 Silk Flower (gluing)
0668 Slats (routing)
0051 Snap on Pre-Tied Cords (securing)
0335 Stripping and Tinning
0281 Suction Drain Reservoir Cap Holes (punching)
0620 Tape Machine (loading)
0594 Totem Blocks (cut & prep)
0313 Tourniquet (cutting)
0314 Tourniquet Webbing Cutting Jig (loading)
0538 Transistors (open.& load)
0020 Transistors (painting)
0386 Tube Socket (4-A) (solder)
0503 Tubing (bending)
0166 2½" Lengths of Rubber Tubing (cut)
0482 Vacuum Cleaner Brushes (crimp and aligning)
0490 Vacuum Cleaner Brushes (cut to length)
0491 Vacuum Cleaner Brushes removing loose hairs)
0585 Yarn (cut for lap loom)
0349 Yarn Cutting (brush line operation)

Miscellaneous

0657 Battery Clip
0393 Canopy Top Parts (match, count, correct)
0260 Envelope Flap (gluing)
0328 Fire Extinguisher (use)
0394 Lavery Parts (assembly line techniques)
0484 Leg Straps (insert plastic button)
0619 Nuts and Bolts (count)
0468 Paint from Hands (clean)
0627 Production (recording)
0460 Serum Vials (stacking)
0205 Shower Door Spline (measuring cutting)
0330 Solder Station Set Up
0618 World Evangelism Promise Boxes
0609 Yarn Dogs (making)

DAILY LIVING SKILLS

Academic
0184 Calculator (using) Part 1
0215 Calculator (using) Part 2
0190 Change (making up to $1.00)
0029 Change (making up to 25¢)
0296 Client Goal Plan (signing)
0177 Coin (discrimination)
0278 Color (coding I)
0279 Color (coding II)
0292 Color (coding III) (match to name and name color)
0327 Coloring within an Area
0104 Color Wheel (using)
0067 First and Last Name (letter sequence recall)
0030 First and Last Name (match)
0206 First and Last Name (print)
0066 First and Last Name (printing with a model)
0608 Letter Components (trace)
0502 Money Order (filling out)
0294 Money (refusing someone trying to take or borrow)
0144 Name (recognition)
0097 Name on Time Card (recognition)
0027 Nickles and Pennies (counting up to 25¢)
0525 Object (choose and identify)
0196 Payroll Check (cashing)
0374 Pre-academics: Sequencing
0160 Roll for Workshop (taking)
0501 Saving Deposit Slip (fill out)
0169 Sign Language for Pictures of Food
0114 Subtraction (2 digit with borrowing)
0356 Supervisor Assistant (for telling time)
0172 Survival Signs (recognize)
0088 Time by the Hour, ½, ¼, Hour (telling)
0500 Withdrawal Slip (filling out)

Communications
0235 Gestural Sign (eat)
0309 Hearing Test (pre-training)
0099 Payphone (simulated operation)
0129 Phone (dial-use)
0139 Pay Phone (using)
0469 Telephone Intercom (answer)

Dressing
0511 Bra (putting on)
0643 Bra (put on & fasten)
0261 Coat (putting on)
0632 Coat (taking off)
0494 Pants (unzipping)
0042 Pants (putting on)
0430 Shoe (lacing)
0323 Shoe (lacing)
0342 Shoe (tying)
0646 Shoe (tying)
0285 Shoes (tying)
0075 Tie (tying)
0322 Underwear and Pants (pulling on)
0141 T-Shirt (putting on)

Eating Skills
0631 Banana (peeling)
0240 Butter (spreading on bread with knife)
0592 Cereal Box (opening)
0271 Food (passing & serving self)
0530 Food Groups (identifying)
0253 Fork (use to spear & eat)
0399 Knife and Fork (cutting)
0661 Proper Eating Etiquette
0226 Restaurant (ordering at walk-up counter)
0357 Snack from Refrig (get)
0400 Spoon (scooping with)
0523 Spoon I (eating with)
0524 Spoon II (eating with)

Housekeeping
0648 Bath Towel (folding)
0103 Bed (making)
0452 Cafeteria (setting up)
0638 Chairs (stacking)
0273 Clothes Dryer (operation)
0526 Coat (hanging)
0334 Dishwasher (operation)
0377 Dishwasher (operation)
0408 Dryer (operation)
0645 Fitted Sheets (folding)
0647 Flat Sheets (folding)
0338 Floor (sweeping)
0507 Gas Stove (cleaning)
0529 Grill (cleaning)
0635 Jacket (hanging on chair)
0644 Jackson Dishwasher (operation)
0650 Laundry (sorting)
0477 Laundry (sorting whites from colors)
0295 Light Bulb (changing)
0074 Lunch (clean up after)
0658 Lunch (clean up)
0407 Napkin (folding)
0122 Pillowcase (putting on)
0359 Pillowcase (putting on)
0659 Serving Counter (clean up)
0660 Serving Counter (set up)
0185 Silverware (putting away)
0053 Silverware (sorting for dishwasher)
0541 Table (setting)
0652 Table (setting)
0496 Table (setting for four)
0270 Table (setting for four)
0522 Tablecloth (clearing)
0242 Tables (bussing)
0637 Toilet Paper Holder (fill)
0284 Towels (folding)
0339 Towels (folding)
0275 Washing Machine (operate)
0649 Whirlpool Dryer (operate)
0651 Whirlpool Washer (operate)
0433 Wash Cloths (folding)

Hygiene
0187 Deodorant (using)
0412 Electric Razor (preparing to shave with)
0299 Eyeglasses (cleaning)
0434 Face (shaving with electric razor)
0478 Face (washing)
0277 Hair Dryer (operation)
0069 Hands (washing)
0360 Hands (washing)
0583 Hands (washing)
0410 Hands (washing and drying)
0528 Hands (washing and drying with soap dispenser & paper towels)
0373 Heat Rollers (operate & use)
0513 Legs (shaving)
0520 Morning Routine
0476 Norelco Electric Razor (clean-up)
0186 Nose (blowing)
0208 Shower (preparing to take)
0256 Showering (soaping body)
0418 Spray Deodorant (apply)
0601 Teeth (brushing)
0200 Teeth (brushing)
0492 Teeth (applying tooth paste and brushing)
0214 Teeth (brushing)
0308 Toilet (flushing)
0355 Toothpaste on brush (put)
0521 Towel (drying off with)
0514 Under Arms (shaving)

Kitchen Skills
0419 Automatic Drip Coffee Maker (operation)
0636 Brewmatic Coffee Maker (use)
0318 Can Opener, manual (use)
0048 Coffee (preparing)
0653 Diabetic Lunch and Snack (preparing)
0204 Egg (frying)
0422 Electric Stove (operation)
0376 Garbage Disposal (operation)
0282 Gas Stove Pilots (lighting)
0087 Instant Coffee (making)
0337 Kool Aid (making)
0591 Milk Bottle (opening)
0610 Milk Shake (making)
0611 Peanut Butter on Grahams (spreading)
0540 Peanut Butter Sandwich (making)
0138 Sandwich (making)
0612 Sandwich (opening)
0409 Scooping
0343 Toaster (operation)
0420 Tuna Sandwich (making)
0382 T.V. Dinner (preparation)

Leisure Time Activities
0411 Auto-Vance Machine (operation)
0588 Bell & Howell Projector (operation)
0145 Coke Machine (operating)
0587 Newcomb Phonograph (use)
0550 Panasonic Cassette Recorder (operation)
0312 Phonograph (operation)
0022 Polaroid Super Shooter (using)
0344 Radio (turning on)
0497 Record Player (operate)

Mobility Skills
0244 Bicycle Hand Signals to Ride to & from Destination (learn & use)
0548 Bus (walking to and from)
0371 City Bus (riding)
0236 Stairs (walking up)

Mobility Skills (cont'd)

0102 Street (crossing)
0035 Street (crossing using a stop light switch box)

Motor Skills

0326 Crayon (positioning)
0130 Front Float (recovery)
0449 Pencil (holding)
0358 Scissors (holding)
0378 Standing from Crawling Position
0495 T-Stool (sit, balance)

Sewing Skills

0311 Button (sewing)
0426 Embroidery (back stitch)
0227 Embroidery (outline stitch)
0228 Embroidery (pattern)
0375 Needle (threading with threader)
0401 Rug (hooking)
0287 Sewing Knot (tying)
0248 Thread (cut from spool ends)
0402 Yarn for Rug Hooking (prep)
0614 Yarn (cut for Rug Hooking)

Miscellaneous

0471 Alarm Clock (setting)
0551 Backpack (removing)
0387 Car Door (locking and unlocking)
0247 Flag (folding)
0472 Hands (shaking)
0243 Lock and Key for Locker (using)
0254 Master Combination Lock (matching numbers on)
0255 Master Combination Lock (opening and closing)
024o Match (strike and put out)
0e54 Medication (prep and take)
033o Playskool Jeep (putting together)
0519 Rolling (side over side)
0340 System 80 (operation)
0499 Taxi (calling)
0345 Training Area (leaving)
043o Training Area (entering)

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	Try a Hundred Ways—The Joy of Training	60.00	

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